Repair Manual

&

Parts List

FUJI Professional

GW690II

GSW690II

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I TROUBLESHOOTING

1. Film cannot be advanced.

Does the pawl (4 - 36) disengage with the pawl wheel (4 - 20) ?

NO → Check the lever assembly (4 - 88) for operation, check the spring and repair as required.

YES ↓

Is the film advance gear train normal ?

NO → Replace the parts as required.

YES ↓

Does the lock lever (2 - 38) come out smoothly from the release lever ?

NO → Check the lock lever (2 - 38) and lock lever assembly (4 - 51) for deformations and unsmooth operations due to come off springs. When position of the lock lever is incorrect, the lock lever assembly (4 - 51) may be bent properly.

YES ↓

Is the exposure counter advanced normally ?

NO → Check the exposure counter drum assembly (2 - 11), rotary plate assembly (4 - 77) and gear assembly (4 - 78) and disc (4 - 99) for smooth operations. The rotary plate may be bent for adjustment.

2. The shutter cannot be released.

Does the gear (7 - 119) intermesh with the rack assembly (4 - 47) ?

NO → Check and repair.

YES ↓

Is the set plate (7 - 42) adjusted correctly ?

NO → Readjust.

YES ↓

Is the spring connected correctly to the lever assembly (4 - 114), and is the lever assembly free from dust and foreign matter ?

NO → Repair or replace.

YES ↓

Is the spring (1 - 22) normal ?

NO → Repair.

3. Focusing cannot be made correctly.

Is the set screw (7 - 65) tightened securely and is the focusing ring positioned correctly ?

NO → Adjust position of the focusing ring and tighten the set screw seucrely.

YES ↓

Are the front and rear lenses installed normally ?

NO → Retighten.

YES ↓

Is the range finder matched correctly ?

NO → Adjust. Adjust the matching at 1.2 m particularly accurately.

4. The range finder and viewfinder frame do not operate correctly.

Does the interlock rod assembly (7 - 121) operate normally ?

NO → Check it for lubrication and positioning plate assembly (7 - 113) for loose screws and deformation.

YES ↓

Is the spring (5 - 33) installed on the linkage assembly (5 - 43) normally and the linkage assembly operate smoothly ?

NO → Repair.

YES ↓

Is the spring (5 - 62) installed correctly and is the interlock lever (5 - 63) engaging with the interlock lever assembly (5 - 47) correctly ?

NO → Properly bend the lever head to adjust the engagement.

YES ↓

Are they free from dust and foreign matter ?

NO → Clean.

5. Continuity for synchronization is poor.

Has the shoe seat assembly (3 - 28) a satisfactory continuity ?

NO → Remove the top cover, check the lead wires (3 - 35 and 3 - 36) for soldering and breakdown, and repair as required.

YES ↓

Has the synchrosocket assembly (7 - 37) a satisfactory continuity ?

NO → Remove the bottom cover and lens assembly, check the lead wires (7 - 215, 7 - 216 and 7 - 217) for soldering and breakdown, and repair as required.

YES ↓

Have both the shoe seat assembly and synchrosocket assembly satisfactory ontinuities ?

NO → In addition to the above indicated actions, remove the front lens assembly, check the shutter assembly for wire connections, and repair as required. Further, check the synchro - switch in the shutter assembly for contact, and if the contact is poor, replace.

II DISASSEMBLY

1. Removing the top cover assembly (3 - 1)

1 - 1 Unscrew and remove the top shutter release assembly (1 - 13), and remove the film advance lever (1 - 18), stopper (1 - 19) and shutter release shaft (1 - 20).

1 - 2 Remove three screws (1 - 1) and screw (1 - 2), and remove the top cover assembly.

1 - 3 Unsolder and disconnect the lead wires (3 - 35 and 3 - 36) from the contacts (3 - 25 and 3 - 32).

NOTE: When removing the top cover, recommend the shutter be set.

2. Removing the range/viewfinder assembly (5 - 1) and film take - up mechanism assembly (4 - 1)

2 - 1 Set the lens to the close - up distance, remove three screws (1 - 3), and remove the range/viewfinder assembly (5 - 1).

2 - 2 Detach the spring (1 - 22) from the screw (2 - 47).

2 - 3 Remove four screws (1 - 4) and set screw (1 - 21), and remove the film take - up mechanism assembly (4 - 1).

3. Removing the lens barrel assembly (7 - 23)

3 - 1 Remove three screws (1 - 8), and remove the bottom cover (1 - 27).

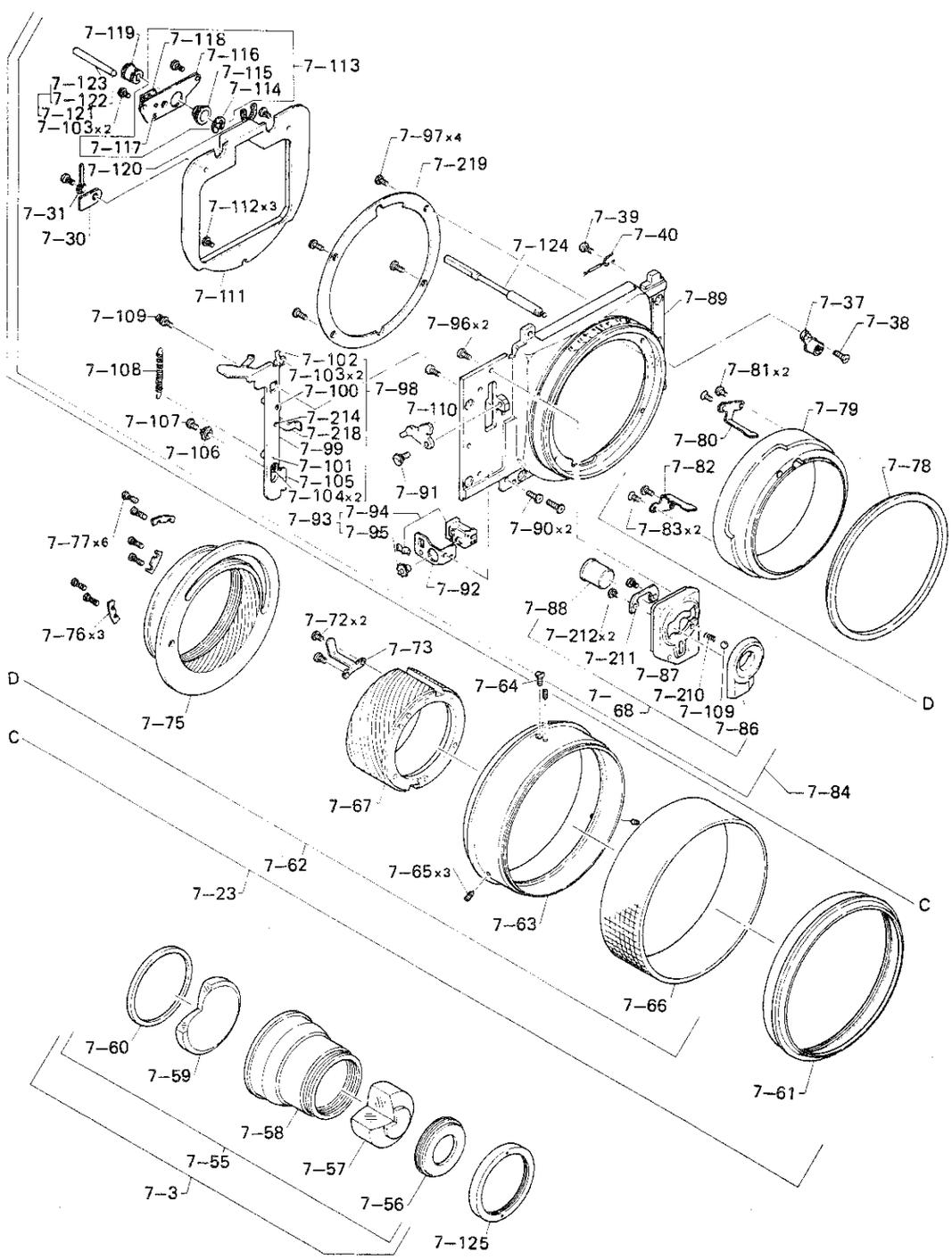
3 - 2 Remove leathers (1 - 12 and 1 - 24) careful so as not to damage them.

3 - 3 Remove two screws (1 - 10) and two screws (1 - 11), and remove the grip (1 - 9).

3 - 4 Remove two set screws (1 - 40) and two screws (1 - 41), and remove the cover (1 - 44).

3 - 5 Remove five screws (1 - 7), and remove the lens barrel assembly (7 - 23) from the body.

Fig. 7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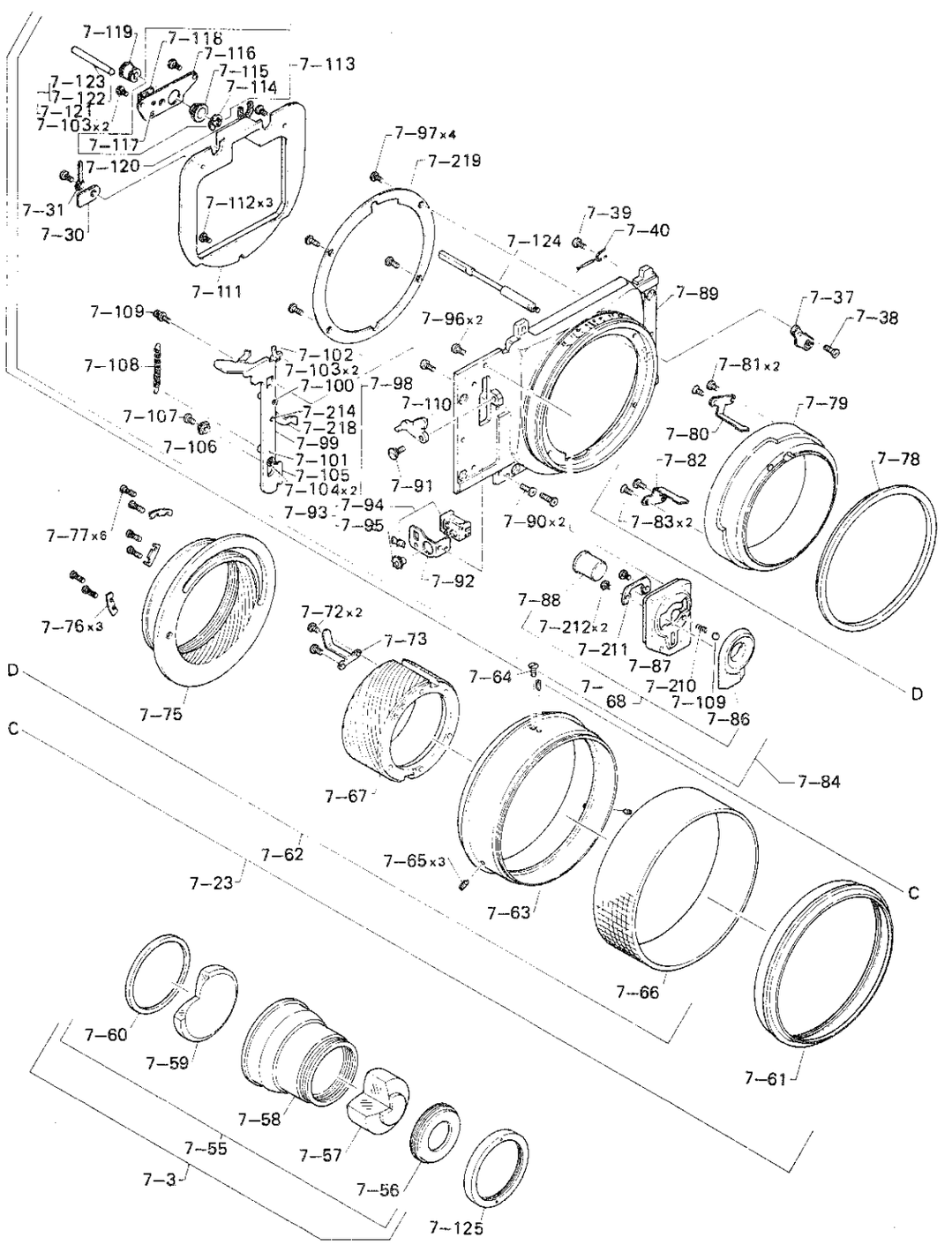
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
7 - 105	45B2188750	Claw	1	X	O	O
7 - 106	32B488080	Guide shaft	1	O	O	O
7 - 107	110M200401S	Screw	1	O	O	O
7 - 108	50B2188300	Spring	1	O	O	O
7 - 109	32B2188290	Guide shaft	1	X	O	O
7 - 110	47B2188210	Lever	1	O	O	O
7 - 111	27B4389670	Light shielding mask	1	O	X	O
7 - 112	110M170301S	Screw	3	O	O	O
7 - 113	46B2188880	Positioning plate assembly	1	O	O	O
7 - 114	191M050T	E - clip	1	O	O	O
7 - 115	32B2188340	Bushing	1	X	O	O
7 - 116	46B2188310	Positioning plate	1	X	O	O
7 - 117	170M15025F	Rivet	2	X	O	O
7 - 118	46B2188320	Shaft holding plate	1	X	O	O
7 - 119	34B2188350	Gear	1	O	O	O
7 - 120	110M200401S	Screw	2	O	O	O
7 - 121	17A2189150	Interlock rod assembly	1	O	O	X
7 - 122	200M24	Steel ball	1	X	O	O
7 - 123	17B2189140	Interlock rod	1	X	X	O
7 - 124	32B2188370	Gear shaft	1	O	O	O
7 - 125	23B402810	Hold ring	1	X	O	O
7 - 201	23B4390000	Protector ring	1	O	X	O
7 - 202	81B4390031	Index window	1	O	X	O
7 - 203	23B4392640	Hood	1	O	X	X
7 - 204	59B4390080	Hood cover	1	O	X	O
7 - 205	51B4390090	Velveteen	1	O	X	O
7 - 206	23B4390100	Stopper ring	1	O	X	O
7 - 207	53B4387850	Screw	2	O	X	O
7 - 208	27B2188820	Moquette	1	O	X	O
7 - 209	200M24	Steel ball	1	O	X	O
7 - 210	50B4389620	Spring	1	O	X	O
7 - 211	86B4389600	Stopper	1	O	X	O

Fig. 7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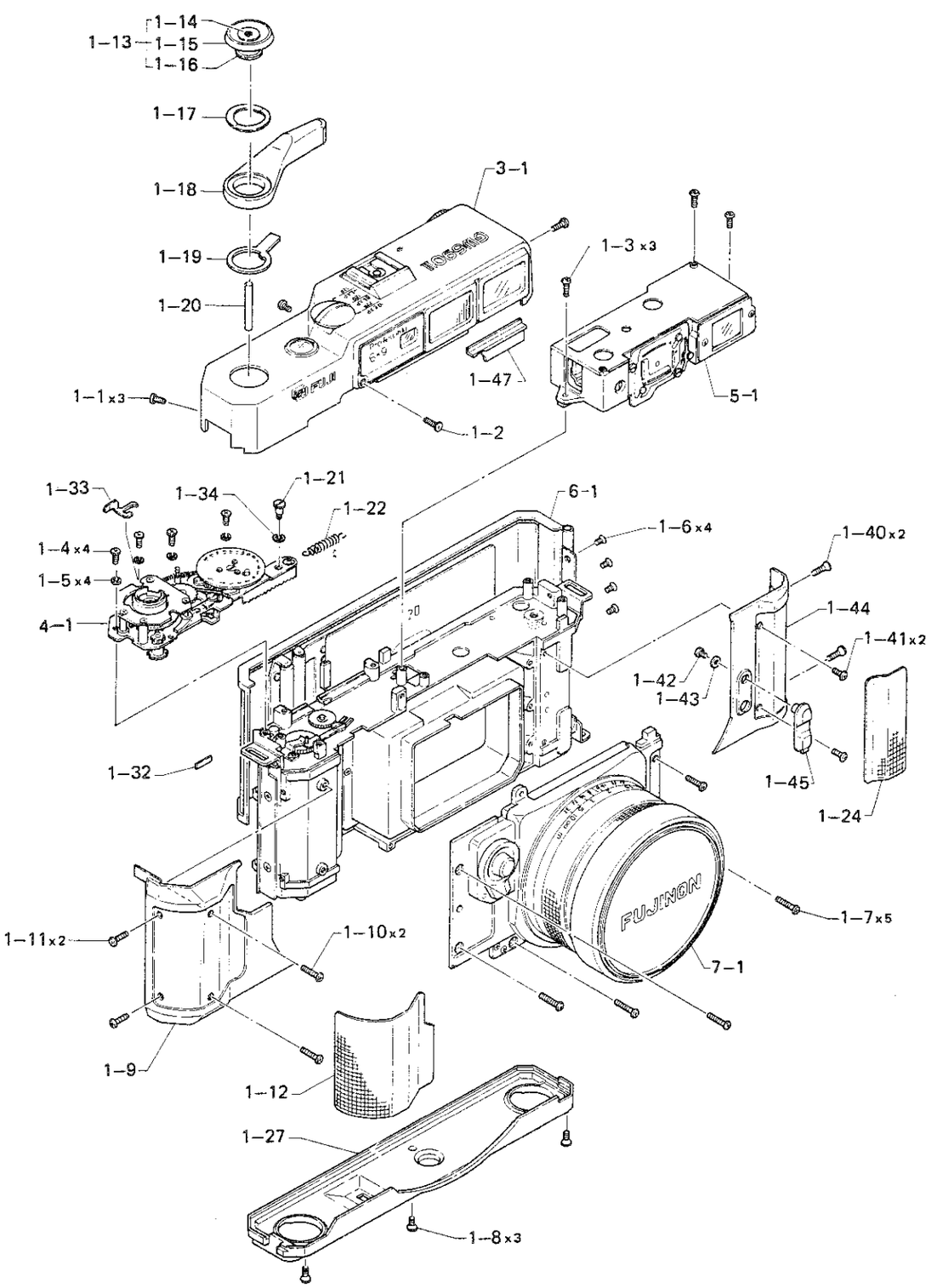
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
7 - 212	113M170301S	Screw	2	○	×	○
7 - 213	27B4389710	Moquette	1	○	×	○
7 - 214	170M15025F	Rivet	1	×	×	○
7 - 215	111B4387880	Lead wire (black)	1	○	×	○
7 - 216	111B4387910	Lead wire (gray)	1	○	×	○
7 - 217	111B4387870	Lead wire (black)	1	○	×	○
7 - 218	85B4389610	Stopper	1	○	×	○
7 - 219	12B4389680	Cover plate	1	○	×	○

VI PARTS LIST GW690II

Fig. 1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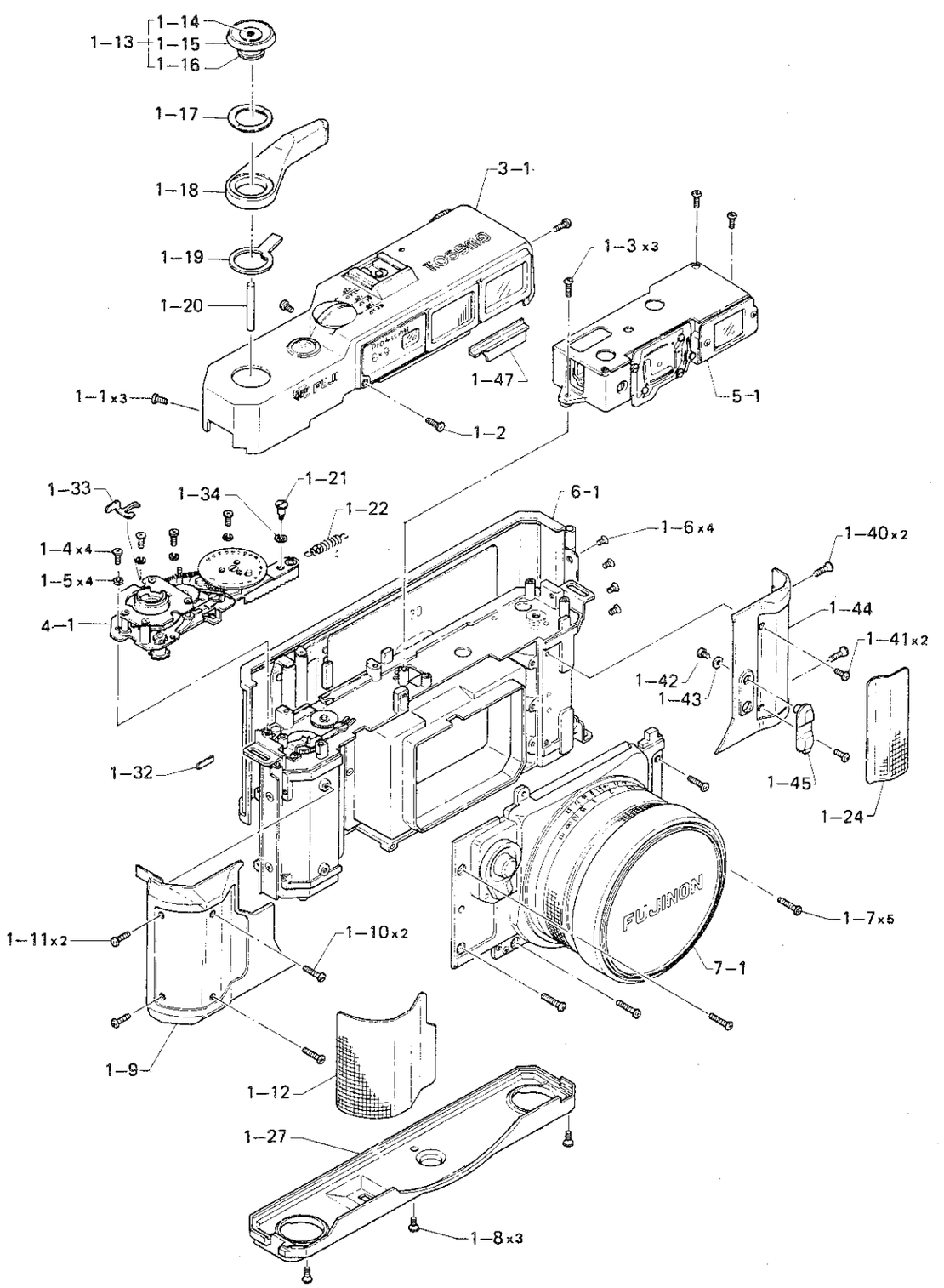
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
1 - 1	53B494260	Screw	3	○	○	
1 - 2	53B2189020	Screw	1	○	○	
1 - 3	110M200603S	Screw	3	○	○	
1 - 4	110M200503S	Screw	4	○	○	
1 - 5	165M202H	Spring washer	4	○	○	
1 - 6	111M170251S	Screw	4	○	○	
1 - 7	110M260603S	Screw	5	○	○	
1 - 8	53B2189030	Screw	3	○	○	
1 - 9	41B4387790	Grip	1	○	×	
1 - 10	110M200903S	Screw	2	○	○	
1 - 11	110M200703S	Screw	2	○	○	
1 - 12	59B4387770	Leather	1	○	×	
1 - 13	84A2189500	Top shutter release assembly	1	○	○	
1 - 14	16B2189090	Top shutter release	1	×	○	
1 - 15	84B2189080	Holder	1	×	○	
1 - 16	55B29680	Washer	1	×	○	
1 - 17	50B29400	Spring washer	1	○	○	
1 - 18	47B489640	Film advance lever	1	○	○	
1 - 19	85B29390	Stopper	1	○	○	
1 - 20	32B2189010	Shutter release shaft	1	○	○	
1 - 21	53B2189060	Set screw	1	○	○	
1 - 22	50B2191320	Spring	1	○	○	
1 - 24	59B4387761	Leather	1	○	×	
1 - 27	11B4387750	Bottom cover	1	○	×	
1 - 32	58B29520	Number plate	1	○	○	
1 - 33	50B2189100	Click spring	1	○	○	
1 - 34	55B2189110	Washer	0 ~ 1	○	○	
1 - 40	53B4387810	Set screw	2	○	×	
1 - 41	110M170303S	Screw	2	○	○	
1 - 42	110M200301S	Screw	1	○	○	
1 - 43	55B4387830	Washer	1	○	○	
1 - 44	11B4387800	Cover	1	○	×	

Fig. 1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REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
1 - 45	11B4387820	Synchro - cover	1	○	×	
1 - 47	81B2192521	Rib	1	○	○	

Fig. 2

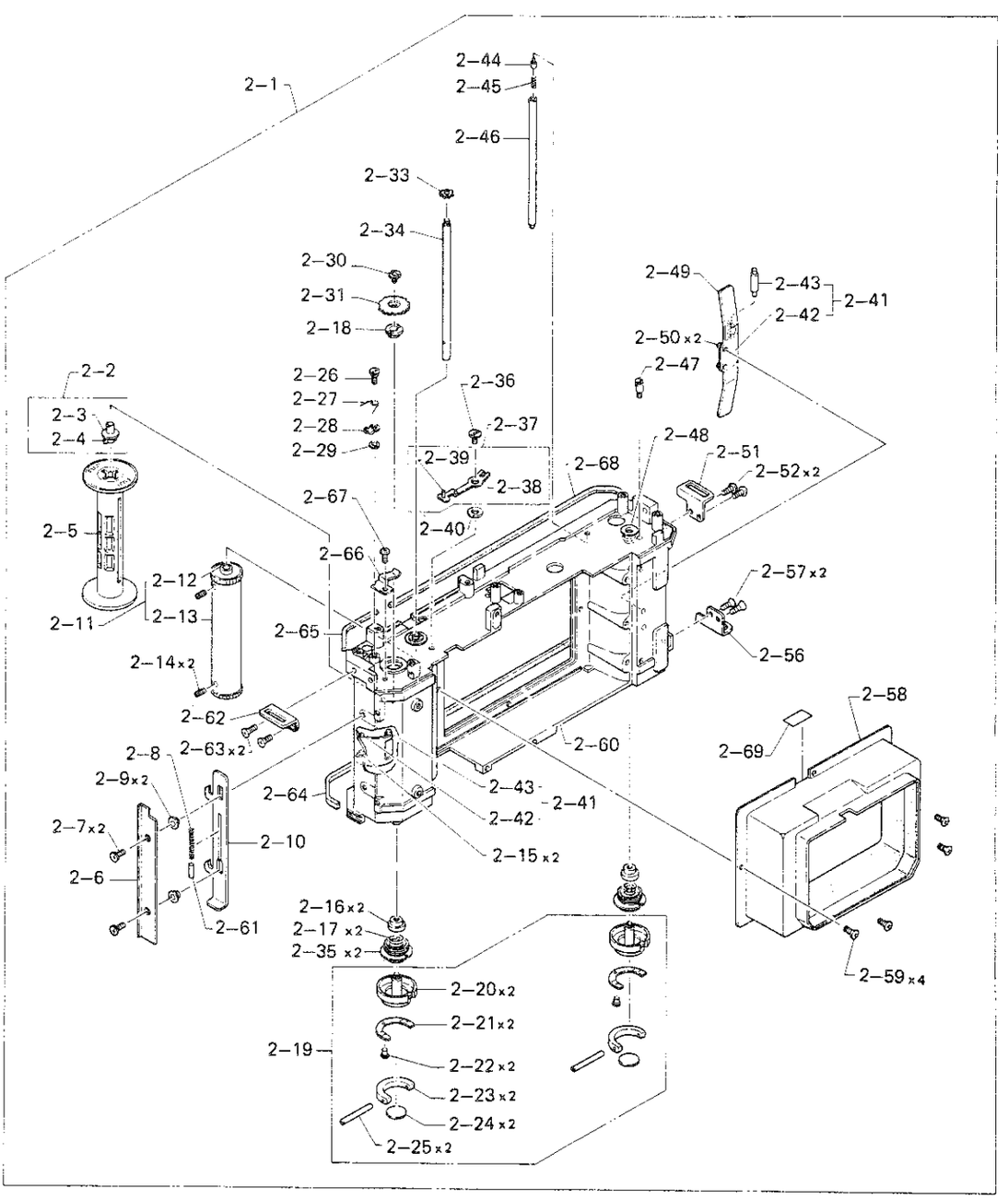
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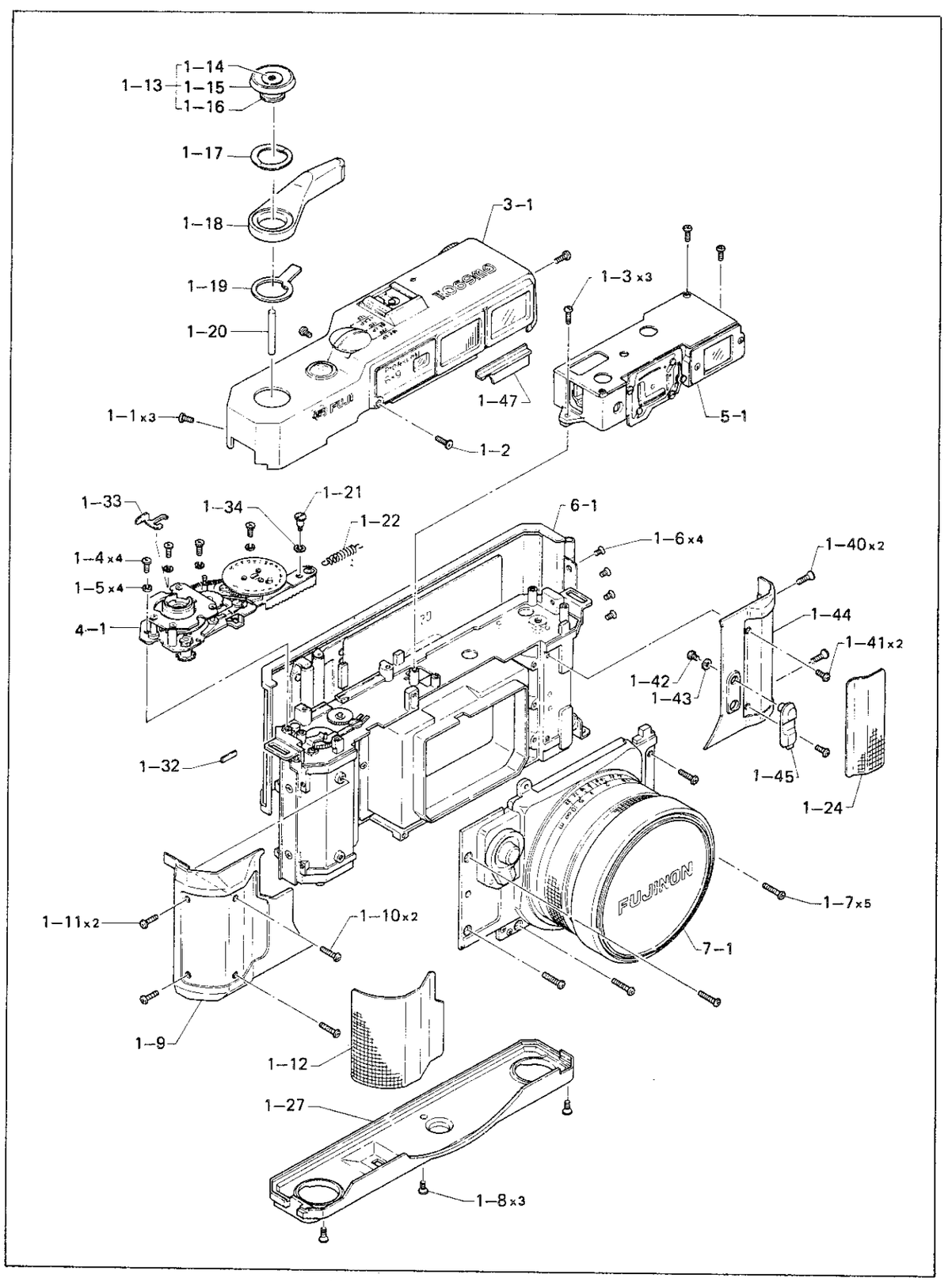
Fig. 1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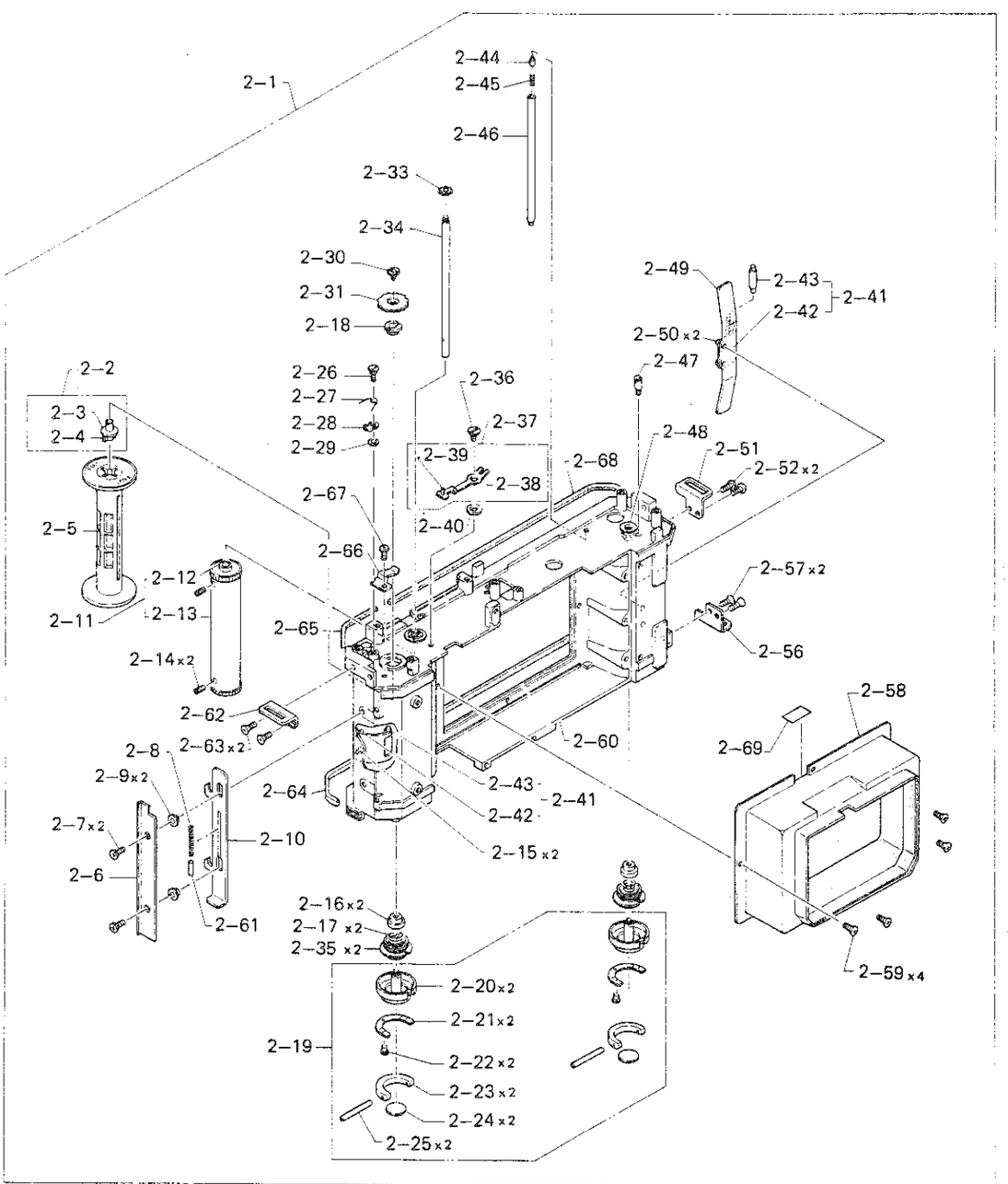
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
2 - 1	301A4388000	Chassis assembly	1	○	×	
2 - 2	32A720040	Take - up shaft assembly	1	○	○	
2 - 3	32B486845	Take - up shaft	1	×	○	
2 - 4	85B30040	Take - up claw	1	×	○	
2 - 5	37B29490	Spool	1	○	○	
2 - 6	85B486990	Base plate	1	○	○	
2 - 7	111M170451S	Screw	2	○	○	
2 - 8	50B4388410	Spring	1	○	×	
2 - 9	30B30950	Hook guide	2	○	○	
2 - 10	45B4388350	Camera back hook	1	○	○	
2 - 11	36A720060	Exposure counter drum assembly	1	○	○	
2 - 12	36B486732	Collar	1	×	○	
2 - 13	36B486724	Exposure counter drum	1	×	○	
2 - 14	120M200503B	Set screw	1	○	○	
2 - 15	170M15020C	Pin	2	×	○	
2 - 16	32B2190060	Spool shaft holder	2	○	○	
2 - 17	50B30771	Spring	2	○	○	
2 - 18	31B30700	Take - up shaft holder	2	○	○	
2 - 19	29A2190940	Take - up spool knob assembly	2	○	○	
2 - 20	29B2190040	Take - up spool knob	2	×	○	
2 - 21	50B920720	Leaf spring	2	×	○	
2 - 22	170M12014N	Pin	2	×	○	
2 - 23	16B855790	Knob	2	○	○	
2 - 24	17B2190050	Shaft	2	○	○	
2 - 25	85B2190070	Cover	2	○	○	
2 - 26	32B30750	Shaft	1	○	○	
2 - 27	50B1070	Spring	1	○	○	
2 - 28	45B1060	Hook	1	○	○	
2 - 29		Washer	1	○	○	
2 - 30	53B30721	Screw	1	○	○	
2 - 31	34B2190101	Take - up gear	1	○	○	
2 - 33	34B2190090	Exposure counter drive wheel	1	○	○	

Fig. 2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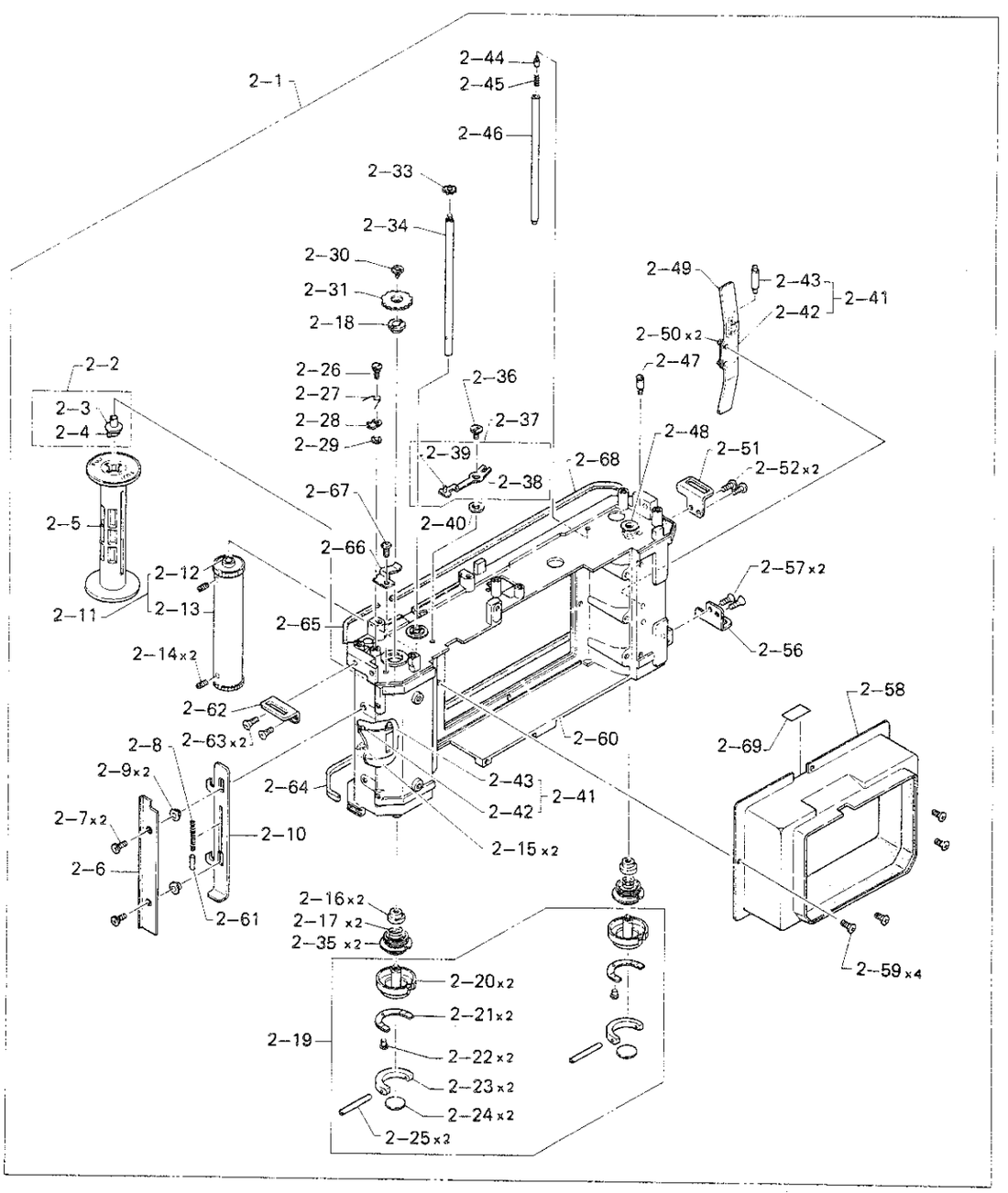
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
2 - 34	32B486752	Exposure counter drum shaft	1	○	○	
2 - 35	23B2190030	Guide ring	2	○	○	
2 - 36	53B2190150	Screw	1	○	○	
2 - 37	47A2190950	Lock lever assembly	1	○	○	
2 - 38	47B2190121	Lock lever	1	×	○	
2 - 39	17B2190130	Lock pin	1	×	○	
2 - 40	55B2190140	Washer	1	○	○	
2 - 41	50A720000	Roller assembly	2	×	○	
2 - 42	50B486970	Spring	2	×	○	
2 - 43	37B486980	Roller	2	×	○	
2 - 44	17B30160	Pin	2	○	○	
2 - 45	50B30170	Spring	2	○	○	
2 - 46	30B30150	Guide roller	1	○	○	
2 - 47	52B2190110	Screw	1	○	○	
2 - 48	31B486830	Film feed spool shaft	1	○	○	
2 - 49	50B486960	Pressure spring	1	×	○	
2 - 50	170M150250	Pin	2	×	○	
2 - 51	41B4388360	Bracket	1	○	×	
2 - 52	111M200403S	Screw	2	○	○	
2 - 56	41B4388400	Bracket	1	○	×	
2 - 57	111M200403S	Screw	2	○	○	
2 - 58	27B2190010	Hood	1	○	○	
2 - 59	110M170353S	Screw	4	○	○	
2 - 60	10B4388200	Chassis	1	×	×	
2 - 61	32B4388420	Guide shaft	1	○	×	
2 - 62	41B4388390	Bracket	1	○	×	
2 - 63	111M200403S	Screw	2	○	○	
2 - 64	27B31790	Moquette (II)	1	○	○	
2 - 65	27B3771300	Moquette	1	○	○	
2 - 66	50B2190211	Friction spring	1	○	○	
2 - 67	110M200203S	Screw	1	○	○	
2 - 68	27B3771310	Moquette	1	○	○	

Fig. 2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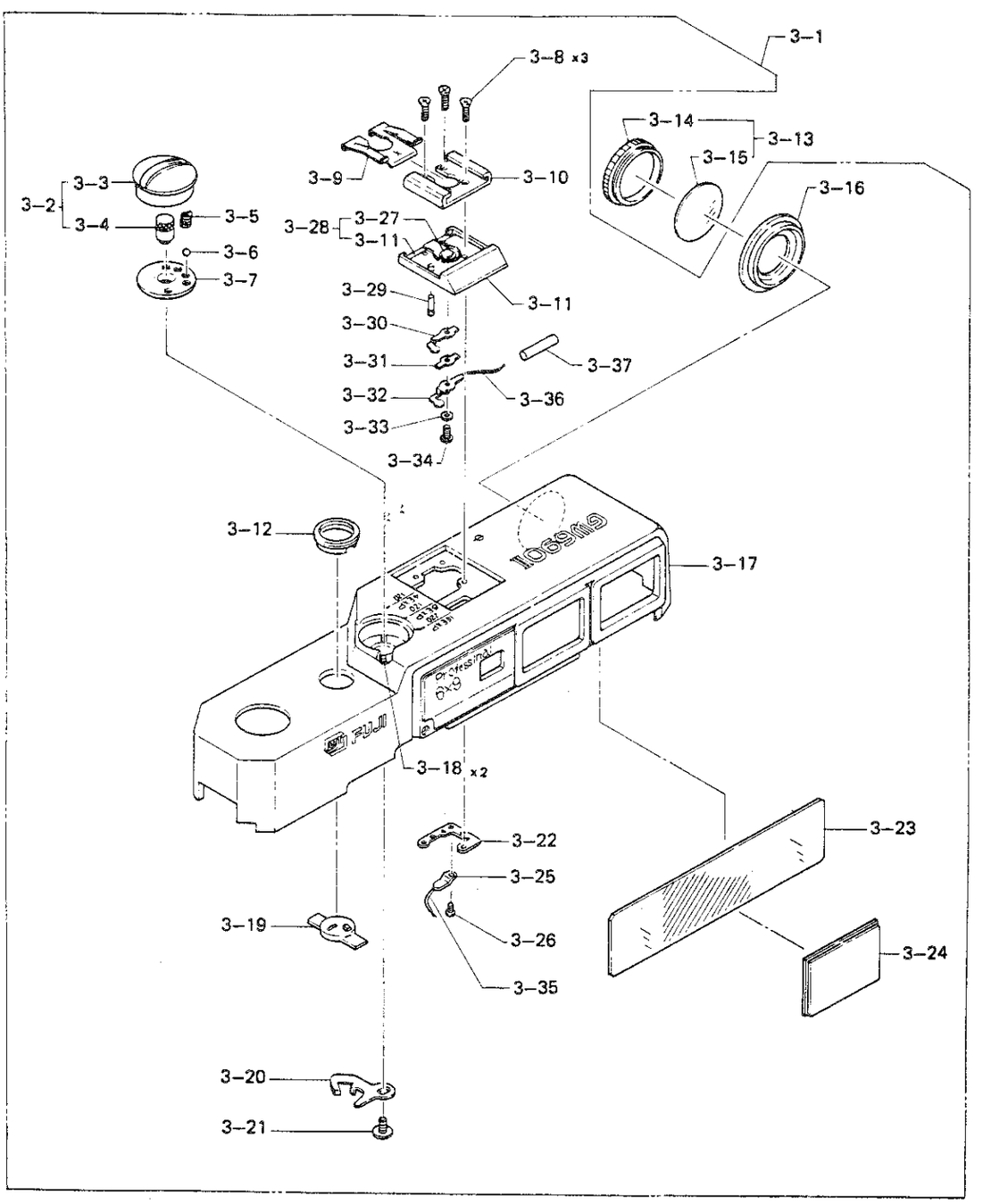
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
2 - 69	27B2190230	Seal	1	○	○	

Fig. 3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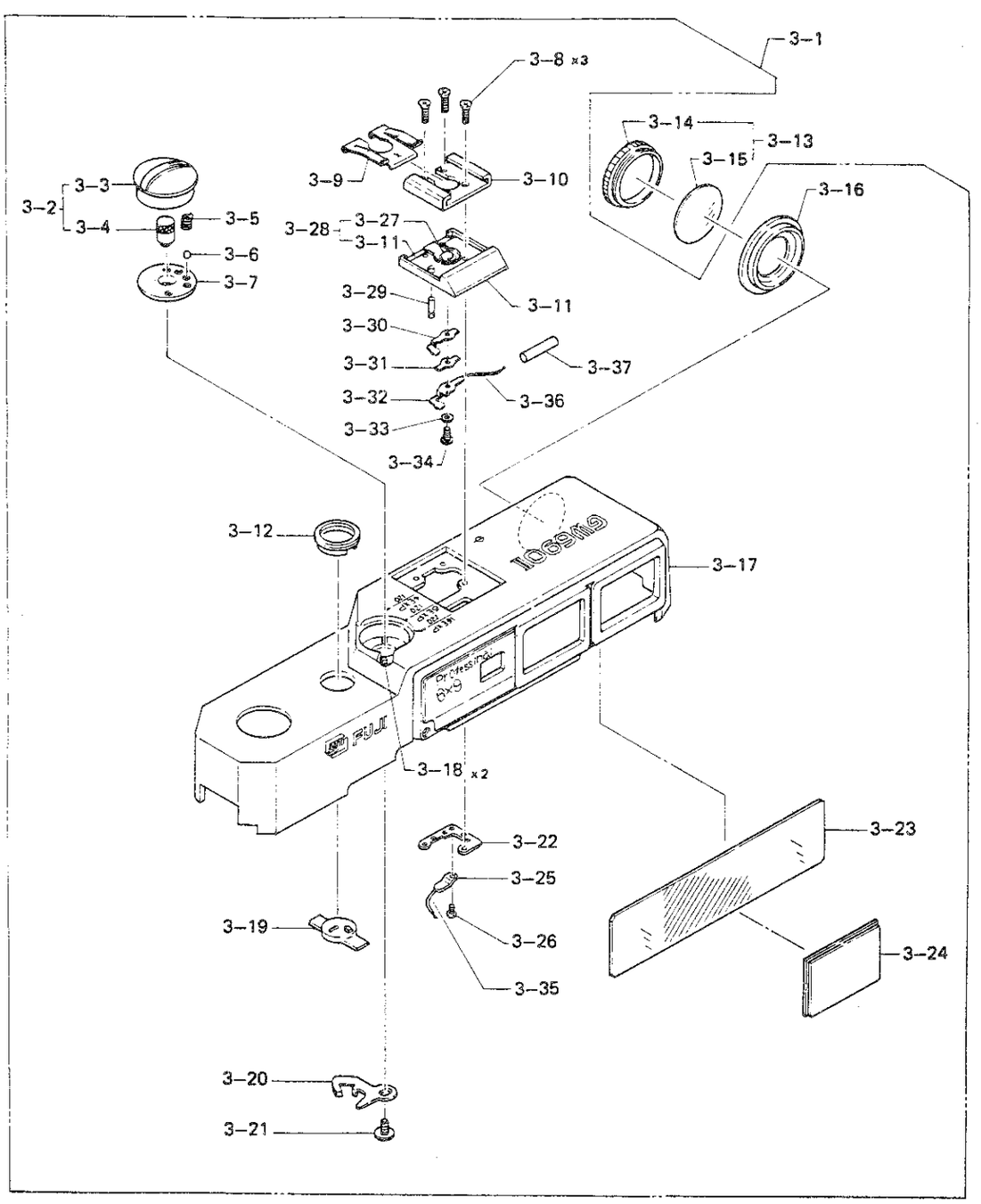
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
3 - 1	303A4389000	Top cover assembly	1	○	×	
3 - 2	16A4389140	Film selector assembly	1	○	×	
3 - 3	16B4389150	Film selector	1	×	×	
3 - 4	32B2192530	Shaft	1	×	○	
3 - 5	50B2192680	Spring	1	○	○	
3 - 6	200M20	Steel ball	1	○	○	
3 - 7	29B2192550	Base plate	1	×	○	
3 - 8	111M170451N	Screw	3	○	○	
3 - 9	11B3288380	Shoe cover	1	○	○	
3 - 10	41B2252410	Accessory shoe	1	○	○	
3 - 11	41B4389120	Seat plate	1	×	×	
3 - 12	84B2192650	Exposure counter window	1	×	○	
3 - 13	23A102900	Viewfinder eyepiece assembly	1	○	○	
3 - 14	23B95570	Eyecup support ring	1	×	○	
3 - 15	23B95580	Lens	1	×	○	
3 - 16	23B2192580	Eyepiece	1	×	○	
3 - 17	11B4389100	Top cover	1	×	×	
3 - 18	17B2192570	Rivet	1	×	○	
3 - 19	6B2192640	Exposure counter window	1	×	○	
3 - 20	47B2192560	Limit lever	1	○	○	
3 - 21	53B2191310	Screw	1	○	○	
3 - 22	85B3286210	Seat plate	1	○	○	
3 - 23	6B2192590	Window glass	1	○	○	
3 - 24	6B2192600	Viewfinder frame	1	○	○	
3 - 25	109B35871	Contact	1	○	○	
3 - 26	110M140121N	Screw	1	○	○	
3 - 27	109B3286130	Contact	1	×	○	
3 - 28	41A4389110	Shoe seat assembly	1	○	×	
3 - 29	17B3288370	Pin	1	○	○	
3 - 30	112B2050650	Contact	1	○	○	
3 - 31	115B2050700	Insulator	1	○	○	
3 - 32	112B2050661	Contact	1	○	○	

Fig. 3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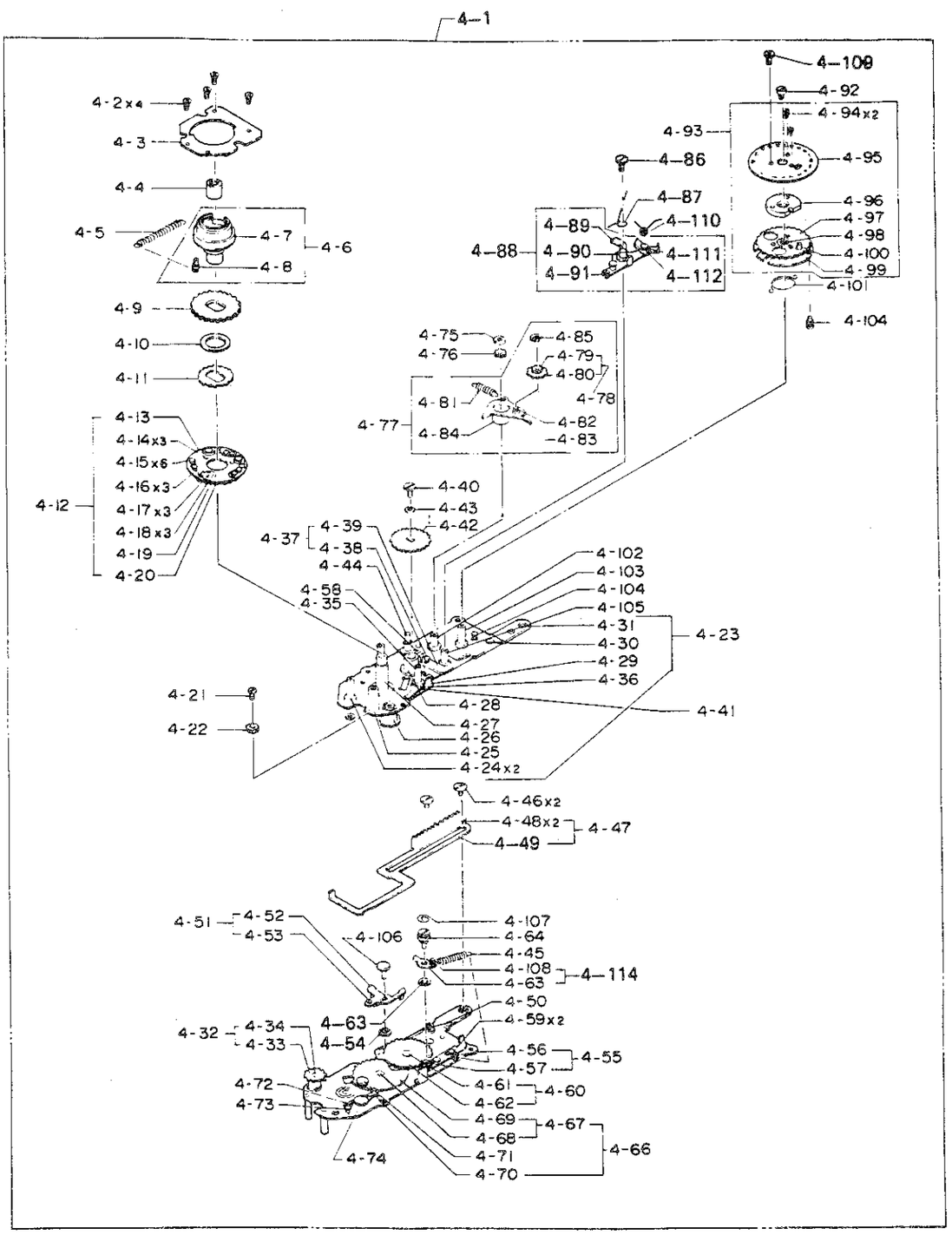
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
3 - 33	55B2050670	Washer	1	○	○	
3 - 34	53B93480	Screw	1	○	○	
3 - 35	111B4387860	Lead wire (red)	1	○	×	
3 - 36	111B4387890	Lead wire (black)	1	○	×	
3 - 37	115B4387900	Tube	1	○	×	

Fig. 4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4. Disassembling the lens barrel assembly (7 - 23)

4 - 1 Turn the front lens assembly (7 - 4) to the left to remove it.

NOTE: Recommend a thin rubber sheet be used.

4 - 2 Remove three screws (7 - 16), and remove the shutter speed selector ring (7 - 13).

4 - 3 Pull out the interlock rod (7 - 123), remove two screws (7 - 120), and remove the positioning plate assembly (7 - 113) together with the gear (7 - 119).

4 - 4 Unsolder and disconnect four lead wires from the PCB (7 - 30).

4 - 5 Remove three screws (7 - 112), and separate the front mask assembly (7 - 84) and the helicoid assembly (7 - 62).

4 - 6 Turn the lens assembly (II) (7 - 3) to the left to remove it.

NOTE: The threads are secured with adhesive. Turn it powerfully but carefully.

4 - 7 Turn the hold ring (7 - 125) to the left to move it with a pin face spanner, and remove the shutter.

4 - 8 Remove the hold ring (7 - 25), two screws (7 - 207) and two screws (7 - 15), and remove the hold (7 - 203), protecting ring (7 - 201) and stopper ring (7 - 206).

4 - 9 Remove the knurled ring (7 - 66), and turn the focusing ring (II) (7 - 61) to the left to remove it.
Remove three screws (7 - 46) and remove the index ring (7 - 28).

NOTE: The steel ball (7 - 35) will come down. Be careful not to lose it.

4 - 10 Remove the screw (7 - 64) and three set screws (7 - 65), and remove the focusing ring (I) (7 - 63).

4 - 11 Remove three screws (7 - 47) and three screws (7 - 46), and with the helicoid faced upward, remove the holder (7 - 51) slowly.

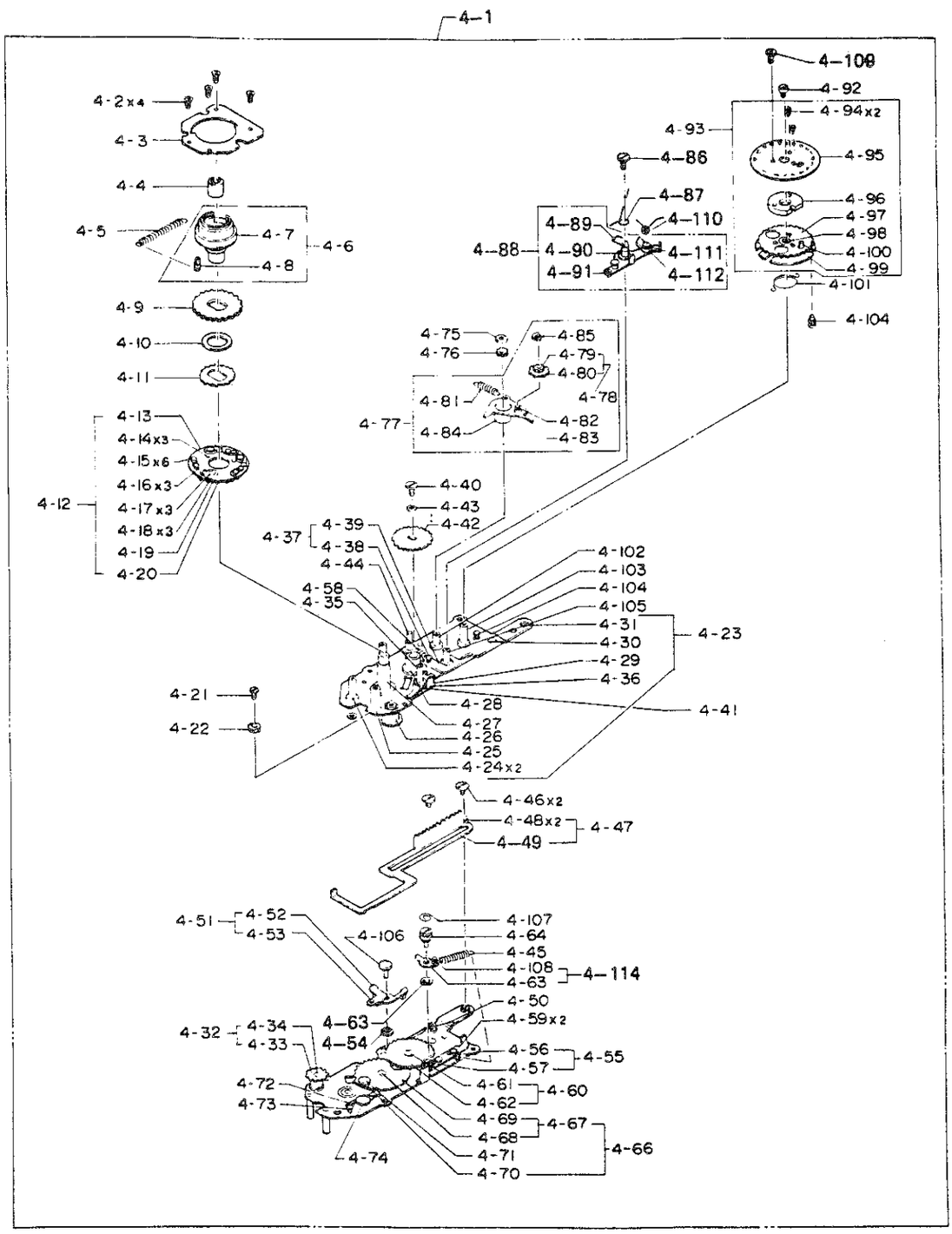
NOTE: 12 spacers (7 - 45) and 15 steel balls (7 - 44) will come out. Be careful not to lose them.

Now, remove the set plate (7 - 42), ring (7 - 43) and shutter frame (7 - 48).

NOTE: The shutter frame assembly (7 - 41) can be removed by removing three screws (7 - 46).

REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
4 - 1	310A2192000	Film take - up mechanism assembly	1	○	○	
4 - 2	111M170401S	Screw	4	○	○	
4 - 3	46B2191090	Base plate	1	○	○	
4 - 4	54B29361	Nut	1	○	○	
4 - 5	56B29380	Spring	1	○	○	
4 - 6	42A2192020	Sleeve assembly	1	○	○	
4 - 7	42B2191010	Sleeve	1	×	○	
4 - 8	17B29340	Pin	1	×	○	
4 - 9	34B2191020	Gear	1	○	○	
4 - 10	55B2191450	Washer	1	○	○	
4 - 11	34B29350	Ratchet wheel	1	○	○	
4 - 12	85A719480	Disc assembly	1	○		
4 - 13	85B29272	Disc	1	×	○	
4 - 14	17B489560	Rivet	3	×	○	
4 - 15	17B29290	Pin	6	×	○	
4 - 16	50B29310	Spring	3	○	○	
4 - 17	17B489570	Claw shaft	3	×	○	
4 - 18	85B489580	Pawl	3	×	○	
4 - 19	34B489550	Gear	1	×	○	
4 - 20	34B489541	Pawl wheel	1	×	○	
4 - 21	53B29190	Screw	1	○	○	
4 - 22	34B489620	Gear	1	○	○	
4 - 23	46A2192010	Base plate assembly	1	×	○	
4 - 24	54B29160	Column	2	×	○	
4 - 25	54B29090	Column	1	×	○	
4 - 26	42B489680	Sleeve	1	×	○	
4 - 27	32B29240	Main shaft	1	×	○	
4 - 28	31B489591	Sleeve	1	×	○	
4 - 29	46B2191000	Arm	1	×	○	
4 - 30	32B2191301	Shaft	1	×	○	
4 - 31	32B2191291	Shaft	1	×	○	
4 - 32	34A2192050	Gear assembly	1	○	○	

Fig. 4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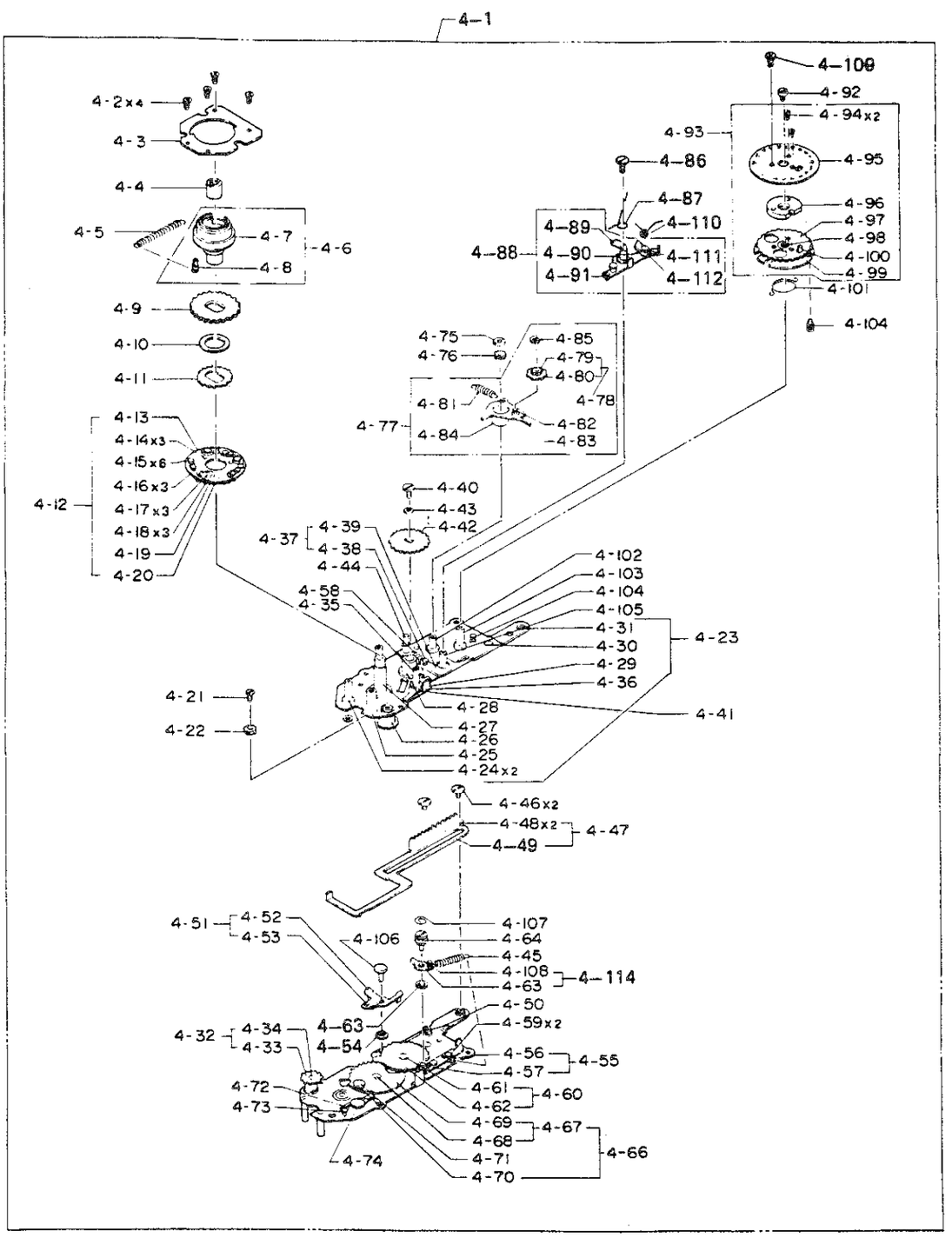
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
4 - 33	34B2191070	Gear	1	X	O	
4 - 34	32B489611	Gear	1	X	O	
4 - 35	54B29440	Column	1	X	O	
4 - 36	45B29482	Pawl	1	X	O	
4 - 37	47A2192140	Return lever assembly	1	X	O	
4 - 38	17B2191400	Pin	1	X	O	
4 - 39	47B2191380	Return lever	1	X	O	
4 - 40	53B29220	Screw	1	O	O	
4 - 41	55B29230	Washer	1	X	O	
4 - 42	34B2191080	Gear	1	O	O	
4 - 43	165M232H	Washer	1	O	O	
4 - 44	17B2191410	Guide shaft	1	X	O	
4 - 45	50B29870	Spring	1	O	O	
4 - 46	53B2191310	Screw	2	O	O	
4 - 47	34A2192110	Rack assembly	1	O	O	
4 - 48	17B28910	Pin	1	X	O	
4 - 49	34B2191280	Rack	1	X	O	
4 - 50	50B2191440	Shaft	1	X	O	
4 - 51	47A2192150	Lock lever assembly	1	O	O	
4 - 52	47B2191420	Lock lever	1	X	O	
4 - 53	17B28830	Interlock pin	1	X	O	
4 - 54	32B28871	Rotary base	1	X	O	
4 - 55	47A2192130	Lever assembly	1	X	O	
4 - 56	47B2191361	Lever	1	X	O	
4 - 57	17B29050	Interlock pin	1	X	O	
4 - 58	50B2191390	Spring	1	O	O	
4 - 59	17B2191370	Guide pin	2	X	O	
4 - 60	34A2192090	Gear assembly	1	O	O	
4 - 61	34B2191230	Gear	1	X	O	
4 - 62	32B2191220	Gear shaft	1	X	O	
4 - 63	55B2191141	Washer	1	X	O	
4 - 64	17B2191152	Shaft	1	X	O	

Fig. 4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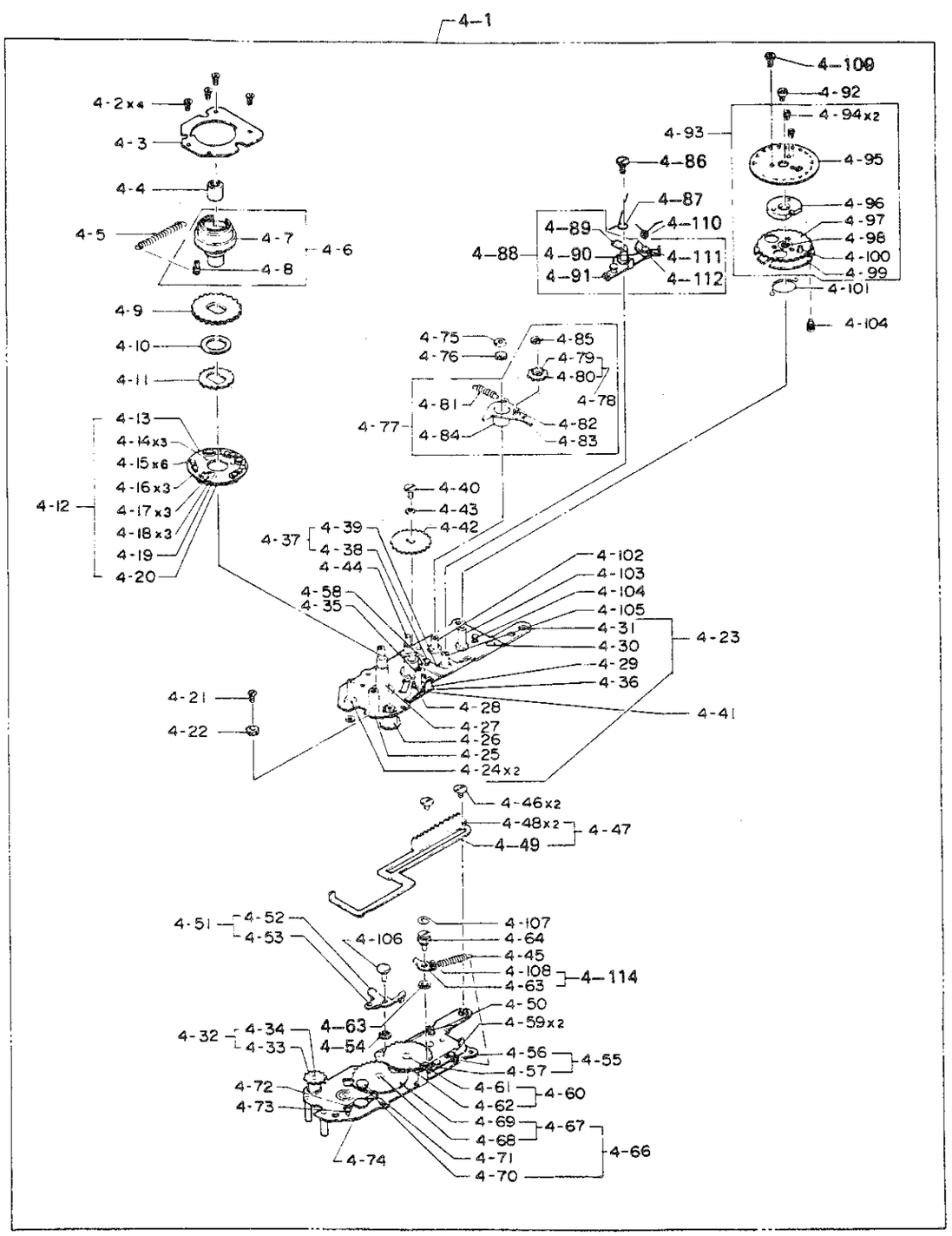
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
4 - 65	47B2191130	Ratchet pawl	1	X	O	
4 - 66	34A2192040	Ratchet wheel assembly	1	O	O	
4 - 67	34A2192030	Ratchet wheel assembly	1	X	O	
4 - 68	32B2191040	Shaft	1	X	O	
4 - 69	34B2191030	Ratchet wheel	1	X	O	
4 - 70	30B2191060	Roller	1	X	O	
4 - 71	32B2191050	Shaft	1	X	O	
4 - 72	47B2191112	Hook	1	X	O	
4 - 73	50B2191121	Spring	1	O	O	
4 - 74	17B2191101	Shaft	1	X	O	
4 - 75	54B494060	Nut	1	O	O	
4 - 76	34B494050	Gear	1	O	O	
4 - 77	85A2192080	Rotary plate assembly	1	O	O	
4 - 78	34A2192070	Gear assembly	1	O	O	
4 - 79	34B2191190	Gear	1	X	O	
4 - 80	34B2191200	Gear	1	X	O	
4 - 81	50B494110	Spring	1	O	O	
4 - 82	32B2191180	Gear shaft	1	X	O	
4 - 83	85B2191160	Rotary plate	1	X	O	
4 - 84	29B2191170	Rotary barrel	1	X	O	
4 - 85	191M012T	E - clip	1	O	O	
4 - 86	53B2191470	Screw	1	O	O	
4 - 87	50B2191463	Spring	1	O	O	
4 - 88	47A2192121	Lever assembly	1	O	O	
4 - 89	47B2191355	Lever	1	X	O	
4 - 90	42B2191340	Bushing	1	X	O	
4 - 91	17B28830	Interlock pin	1	X	O	
4 - 92	53B28730	Screw	1	O	O	
4 - 93	34A2192100	Dial assembly	1	O	O	
4 - 94	53B721100	Screw	2	O	O	
4 - 95	58B494193	Dial	1	O	O	
4 - 96	24B494181	Spacer	1	O	O	

Fig. 4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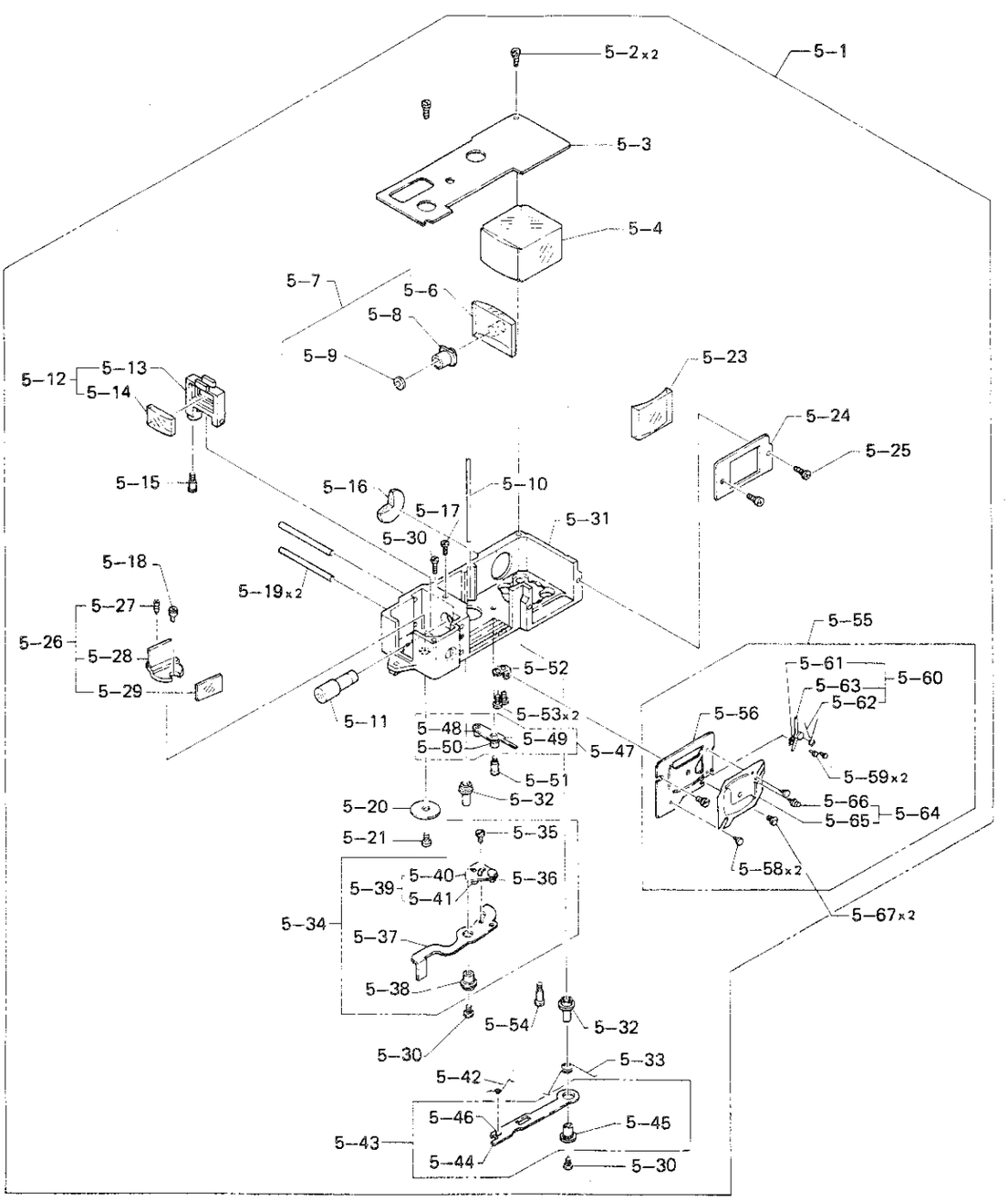
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
4 - 97	34B494170	Counter gear	1	X	O	
4 - 98	29B2191250	Sleeve	1	X	O	
4 - 99	34B494140	Disc	1	X	O	
4 - 100	17B2191260	Connecting pin	1	X	O	
4 - 101	50B28720	Spring	1	O	O	
4 - 102	29B2191210	Shaft holder	1	X	O	
4 - 103	32B2191240	Shaft	1	X	O	
4 - 104	17B2191270	Stopper pin	2	X	O	
4 - 105	32B2191330	Lever shaft	1	X	O	
4 - 106	17B2191430	Lever shaft	1	X	O	
4 - 107	50B2191490	Spring	1	O	O	
4 - 108	17B2191480	Pin	1	X	O	
4 - 109	111M140501S	Screw	1	O	O	
4 - 110	50B4388911	Spring	1	X	O	
4 - 111	32B4388900	Shaft	2	X	O	
4 - 112	82B4388890	Lever	1	X	O	
4 - 114	47A2192160	Lever assembly	1	X	O	

Fig. 5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REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
5 - 1	99A932A00	Range/viewfinder assembly (SR26A)	1	○	○	
5 - 2	110M170251S	Screw	2	○	○	
5 - 3	11B2193450	Cover	1	○	○	
5 - 4	2A2167030	Prism	1	×	○	
5 - 6	1B2167070	Lens	1	×	○	
5 - 7	21A2193730	Aperture barrel assembly	1	×	○	
5 - 8	21B2193460	Aperture barrel	1	×	○	
5 - 9	26B450260	Aperture	1	×	○	
5 - 10	3B2167080	Reflector	1	×	○	
5 - 11	2A2167040	Prism	1	×	○	
5 - 12	21A2193710	Moving frame assembly	1	×	○	
5 - 13	21B2193340	Moving frame	1	×	○	
5 - 14	1B2167110	Lens	1	×	○	
5 - 15	17B2193350	Pin	1	×	○	
5 - 16	1B2167050	Lens	1	×	○	
5 - 17	120M200303F	Set screw	1	○	○	
5 - 18	17B32470	Eccentric pin	1	×	○	
5 - 19	30B2193360	Guide rail	2	×	○	
5 - 20	50B32480	Leaf spring	1	○	○	
5 - 21	53B32490	Screw	1	○	○	
5 - 23	19B2167060	Lens	1	×	○	
5 - 24	11B2193220	Mask	1	○	○	
5 - 25	111M170251S	Screw	1	○	○	
5 - 26	10A2193720	Mirror base assembly	1	×	○	
5 - 27	53B32460	Adjust screw	1	×	○	
5 - 28	10B2193240	Mirror base	1	×	○	
5 - 29	3B2167120	Reflector	1	×	○	
5 - 30	53B32580	Screw	3	○	○	
5 - 31	10B2193210	Viewfinder case	1	×	○	
5 - 32	32B32590	Shaft	2	×	○	
5 - 33	50B2193330	Spring	1	○	○	
5 - 34	47A2193770	Linkage assembly	1	○	○	

Fig. 5

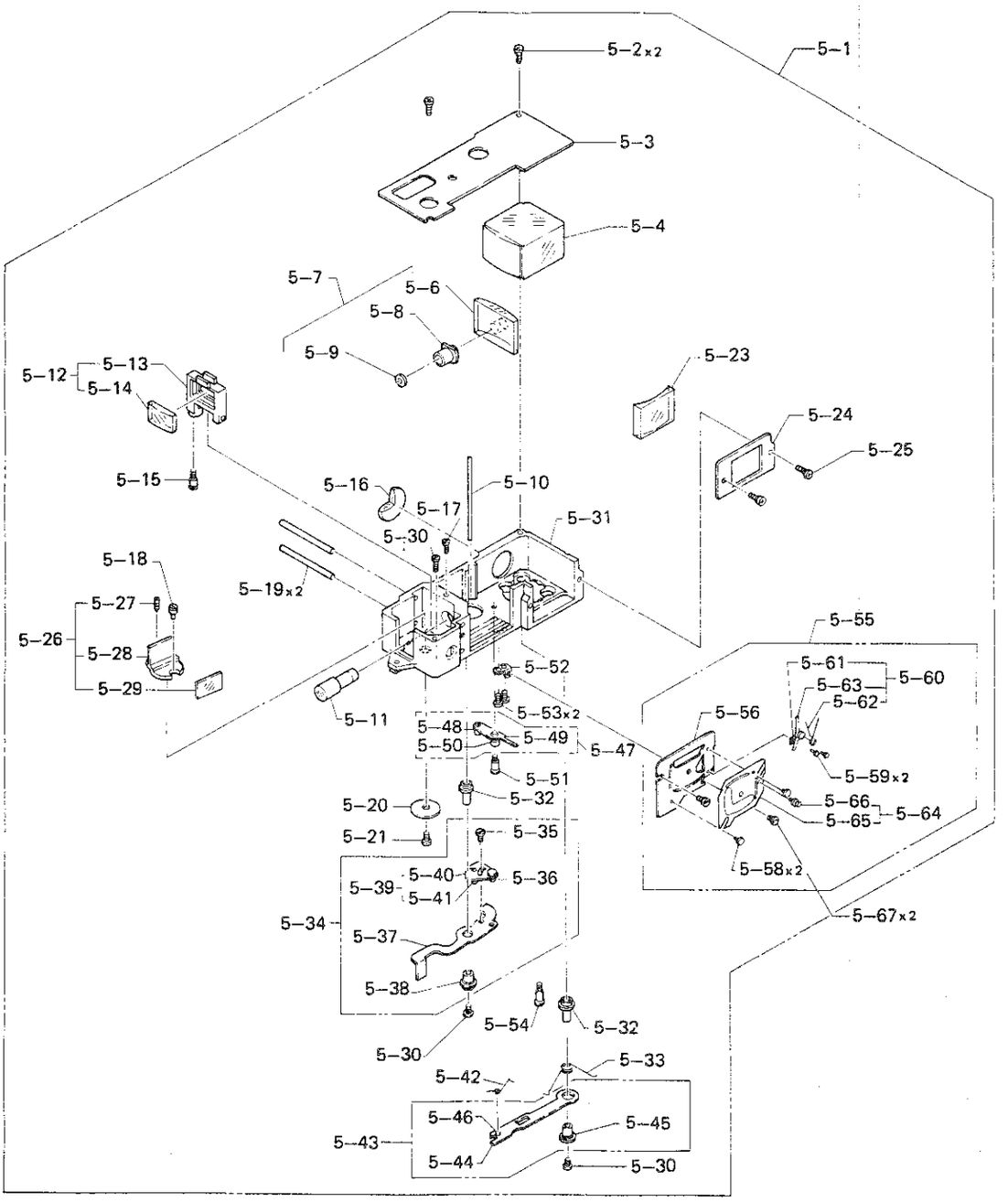
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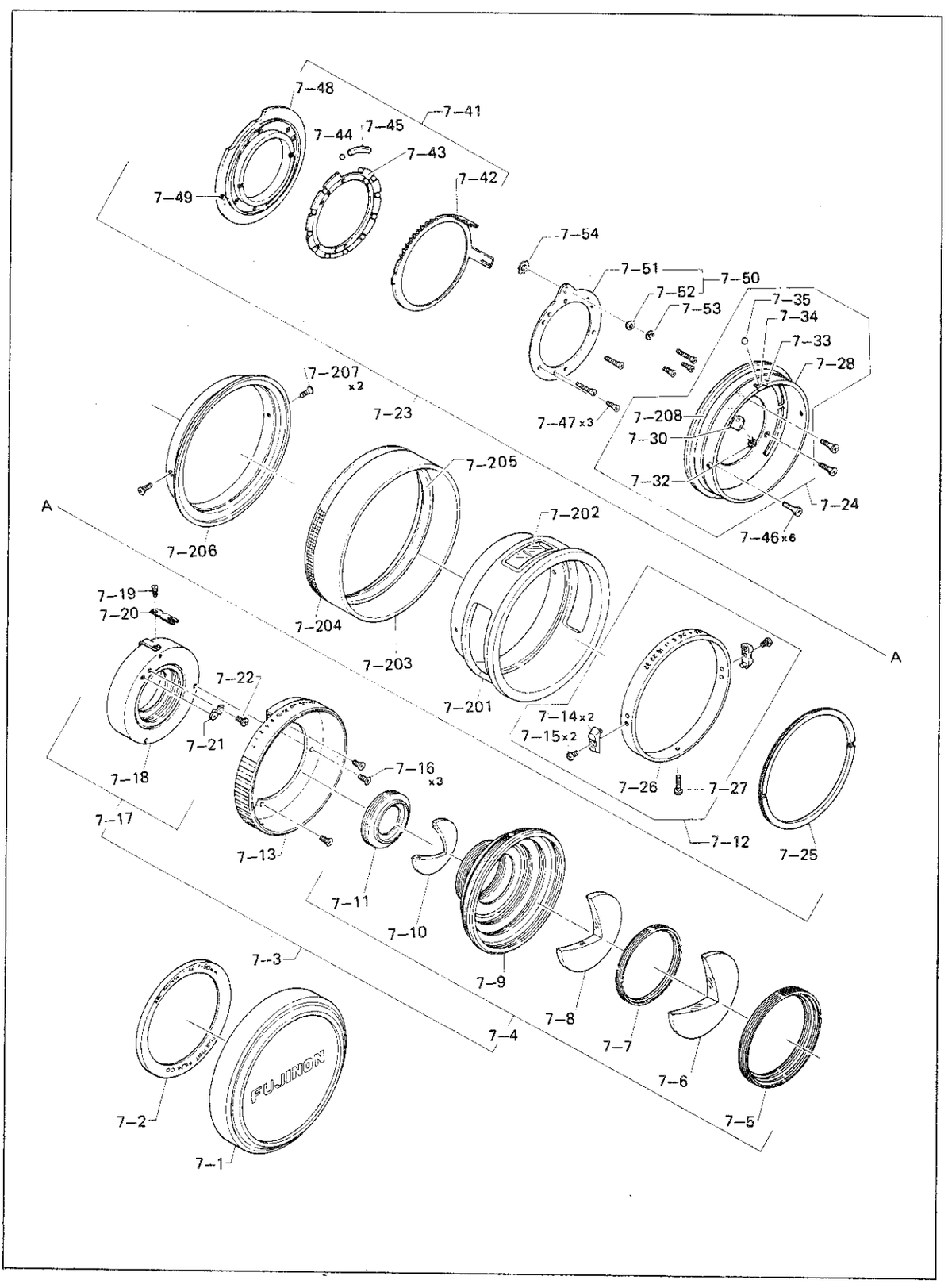
Fig. 2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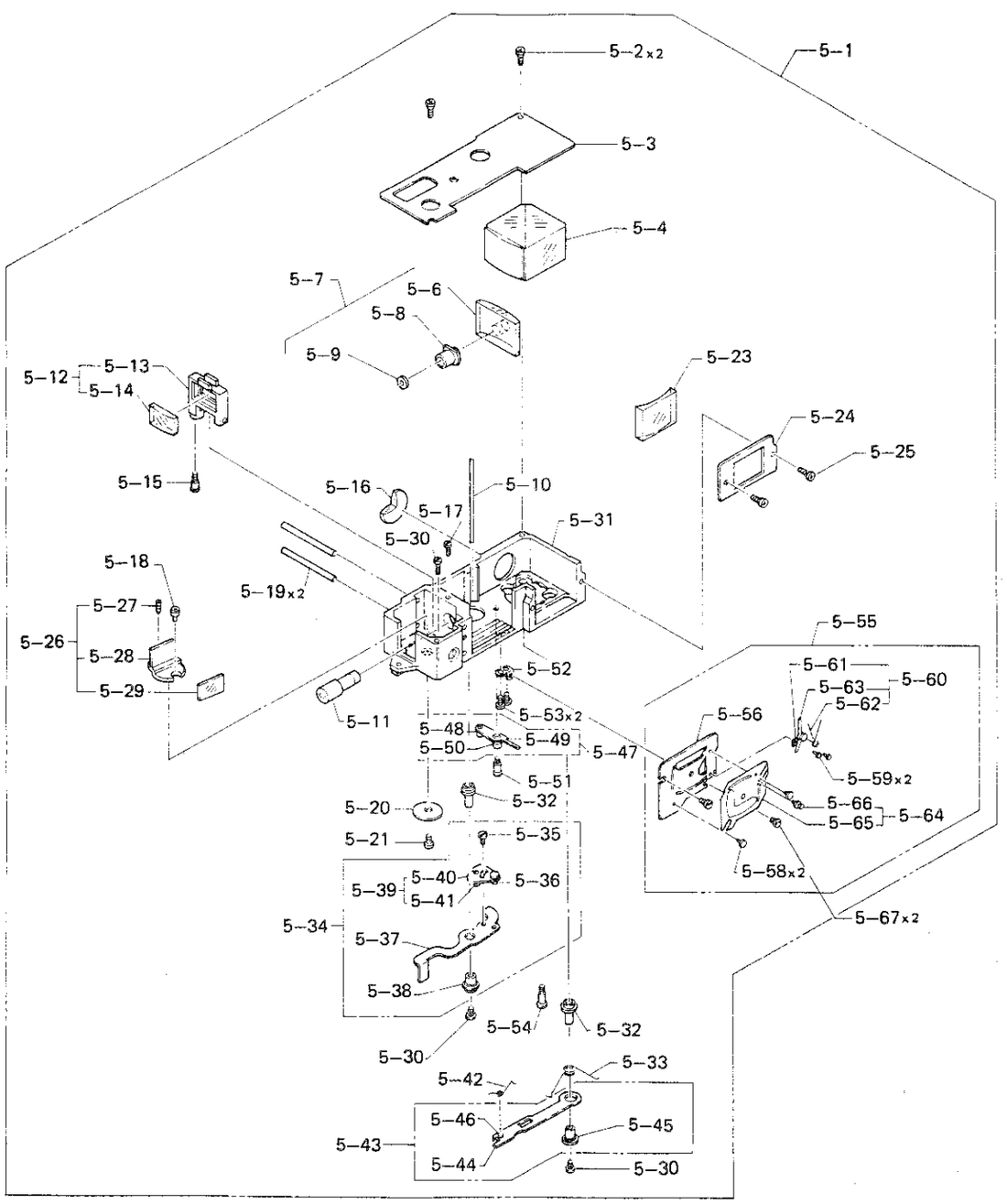
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
5 - 35	53B32770	Screw	1	X	O	
5 - 36	32B32760	Shaft	1	X	O	
5 - 37	47B2193270	Linkage	1	X	O	
5 - 38	42B2193280	Bushing	1	X	O	
5 - 39	47A2193760	Adjust lever assembly	1	X	O	
5 - 40	47B2193290	Adjust lever	1	X	O	
5 - 41	17B32740	Pin	1	X	O	
5 - 42	50B2193470	Spring	1	O	O	
5 - 43	47A2193750	Linkage assembly	1	O	O	
5 - 44	47B2193310	Linkage	1	X	O	
5 - 45	42B2193320	Bushing	1	X	O	
5 - 46	17B29290	Pin	1	X	O	
5 - 47	47A2193810	Interlock lever assembly	1	O	O	
5 - 48	17B2193300	Pin	1	X	O	
5 - 49	47B450331	Interlock lever	1	X	O	
5 - 50	42B450340	Bushing	1	X	O	
5 - 51	53B450361	Screw	1	O	O	
5 - 52	41B2193250	Angle	1	O	O	
5 - 53	110M170251S	Screw	2	O	O	
5 - 54	17B2193260	Pin	1	X	O	
5 - 55	29A2193800	Viewfinder frame assembly	1	O	O	
5 - 56	29B213370	Base plate	1	X	O	
5 - 57	5B2193380	Stationary viewfinder frame	1	X	O	
5 - 58	17B2193400	Guide pin	2	X	O	
5 - 59	170M10012B	Pin	2	X	O	
5 - 60	41A2193780	Angle assembly	1	X	O	
5 - 61	41B2193410	Angle	1	X	O	
5 - 62	17B2193430	Spring	1	X	O	
5 - 63	47B2193420	Interlock lever	1	X	O	
5 - 64	5A2193790	Moving viewfinder frame assembly	1	X	O	
5 - 65	5B2193390	Moving viewfinder frame	1	X	O	
5 - 66	17B450281	Pin	1	X	O	

Fig. 5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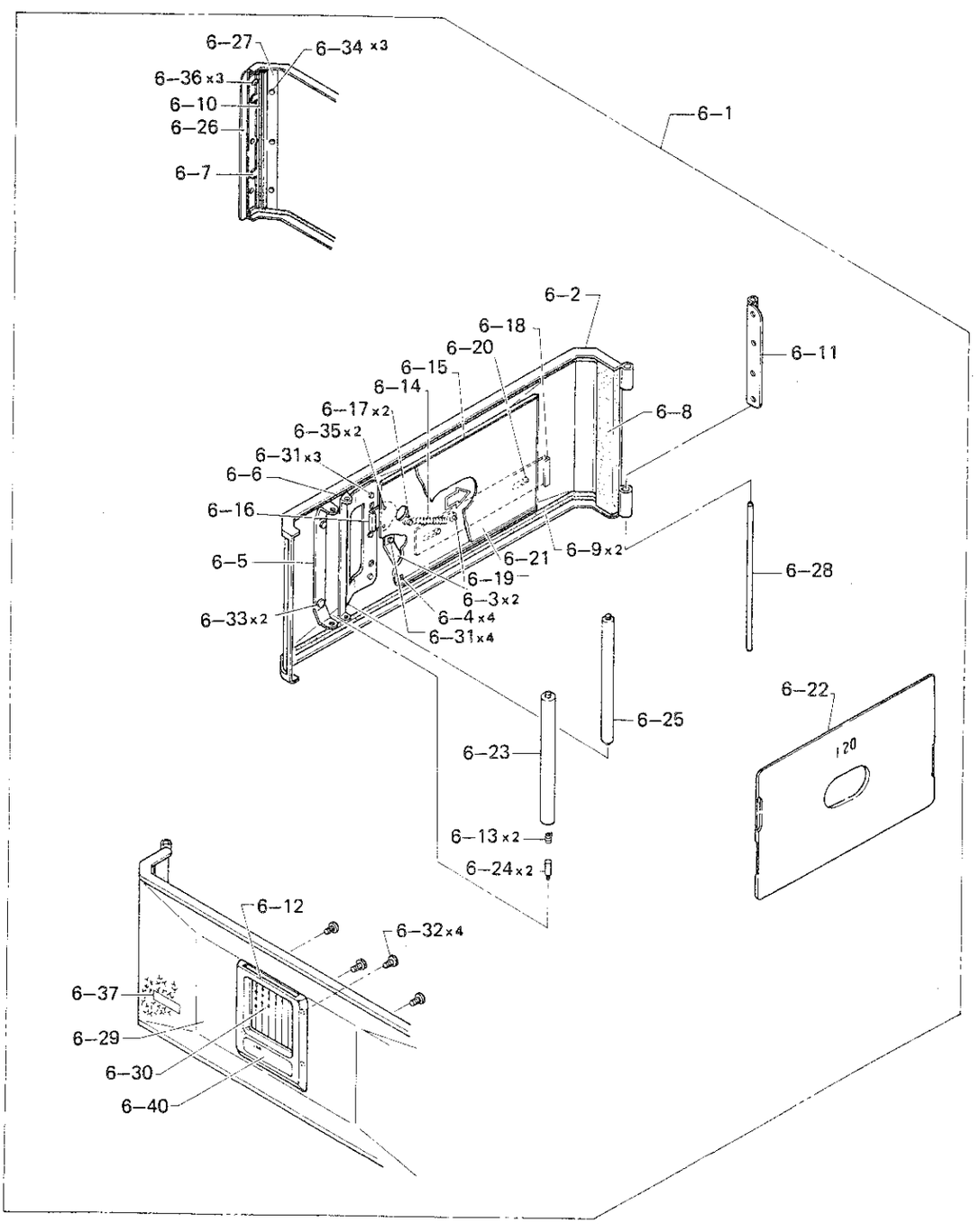
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
5 - 67	53B2193440	Screw	2	○	○	

Fig. 6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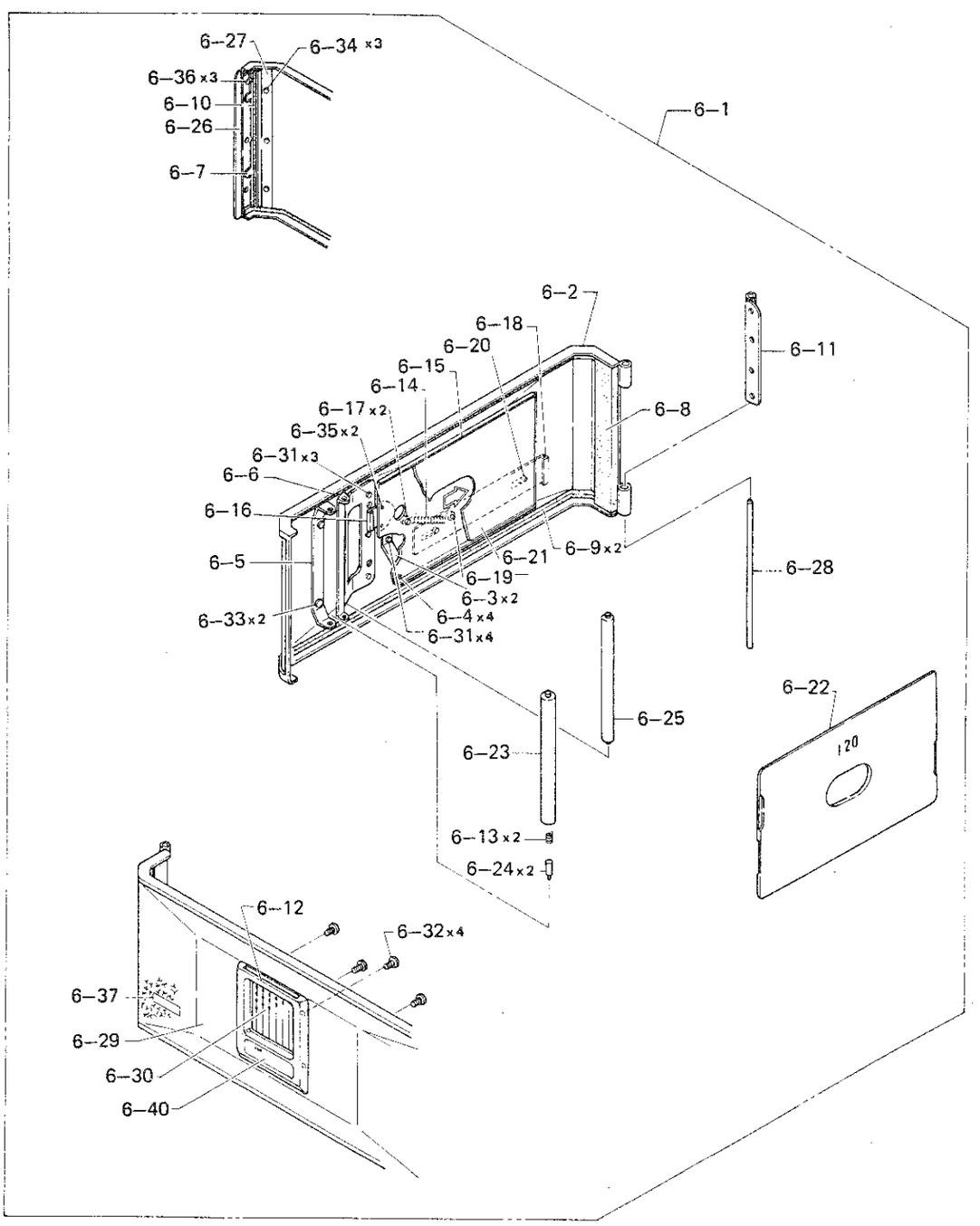
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
6 - 1	302A4389250	Camera back assembly	1	○	×	
6 - 2	11B4389380	Camera back	1	×	×	
6 - 3	50B31660	Spring	2	×	○	
6 - 4	17BM31700	Rivet	4	×	○	
6 - 5	85B31710	Roller support	1	×	○	
6 - 6	50B31730	Leaf spring	1	×	○	
6 - 7	45B31760	Hook	1	×	○	
6 - 8	27B31780	Moquette (I)	1	○	○	
6 - 9	27B31790	Moquette (II)	2	○	○	
6 - 10	27B32000	Moquette (III)	1	○	○	
6 - 11	19B32020	Hinge	1	○	○	
6 - 12	12B3287173	Pocket	1	×	○	
6 - 13	50B30170	Spring	1	○	○	
6 - 14	50B94640	Spring	1	×	○	
6 - 15	11B492530	Pressure plate holder	1	×	○	
6 - 16	44B492540	Stationary plate	1	×	○	
6 - 17	17B492550	Pin	1	×	○	
6 - 18	44B492560	Moving plate	1	×	○	
6 - 19	17B492570	Pin	1	×	○	
6 - 20	17B492580	Guide rivet	2	×	○	
6 - 21	51B492600	Velveteen	1	×	○	
6 - 22	44B492610	Pressure plate	1	○	○	
6 - 23	37B492630	Roller	1	○	○	
6 - 24	17B492640	Moving pin	1	○	○	
6 - 25	37B492660	Roller	1	○	○	
6 - 26	27B492672	Cover plate	1	×	○	
6 - 27	27B492680	Light shielding plate	1	×	○	
6 - 28	32B32031	Hinge shaft	1	○	○	
6 - 29	59B4389400	Leather	1	○	×	
6 - 30	58B3287212	Cover plate	1	○	○	
6 - 31	170M15014B	Pin	7	×	○	
6 - 32	113M170221S	Screw	4	×	○	

Fig. 6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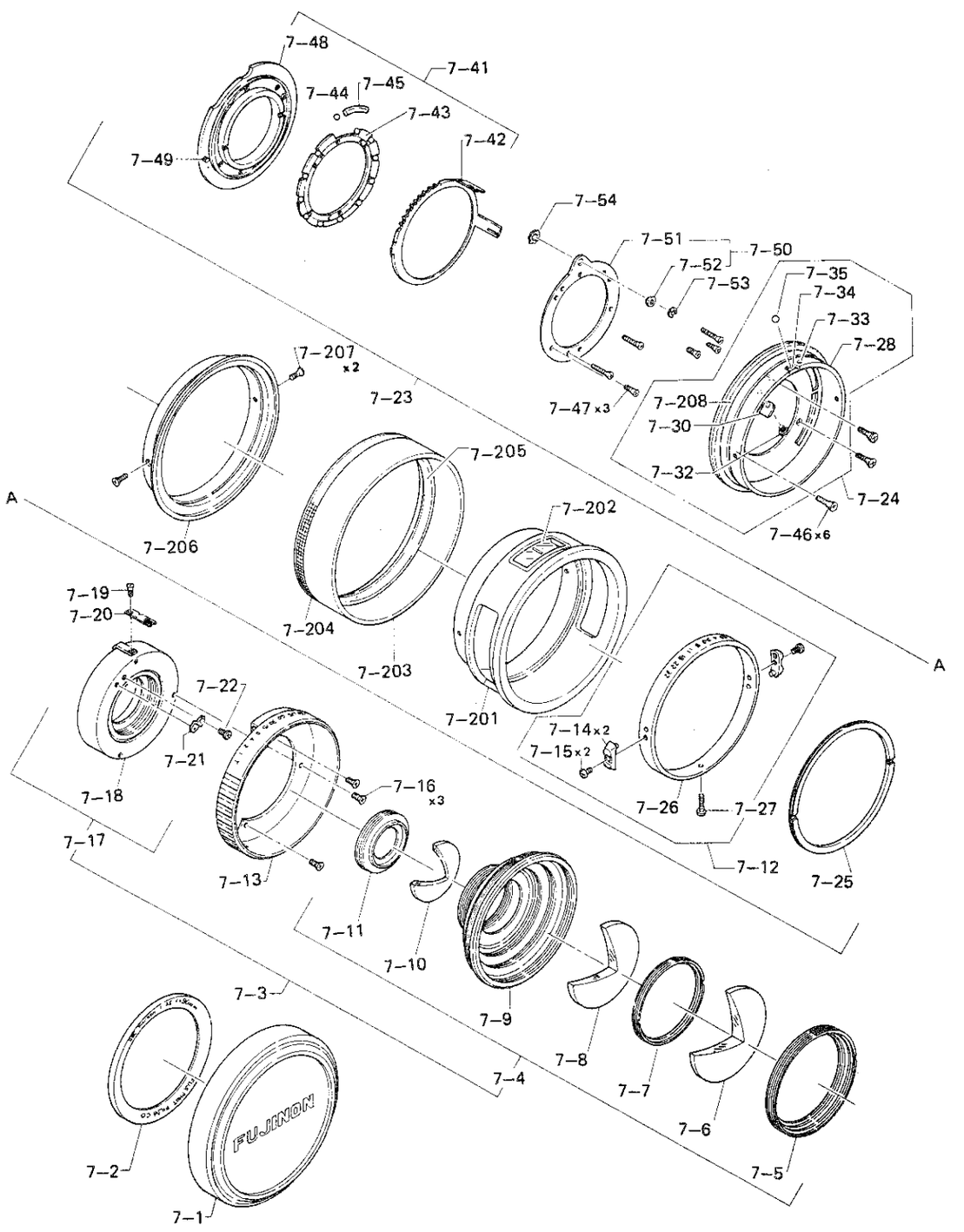
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
6 - 33	170M15022B	Pin	2	X	O	
6 - 34	170M15028B	Pin	3	X	O	
6 - 35	170M200016B	Pin	2	X	O	
6 - 36	170M15022B	Pin	3	X	O	
6 - 37	58B29520	Number plate	1	O	O	
6 - 40	58B3772352	Name plate	1	O	O	

Fig. 7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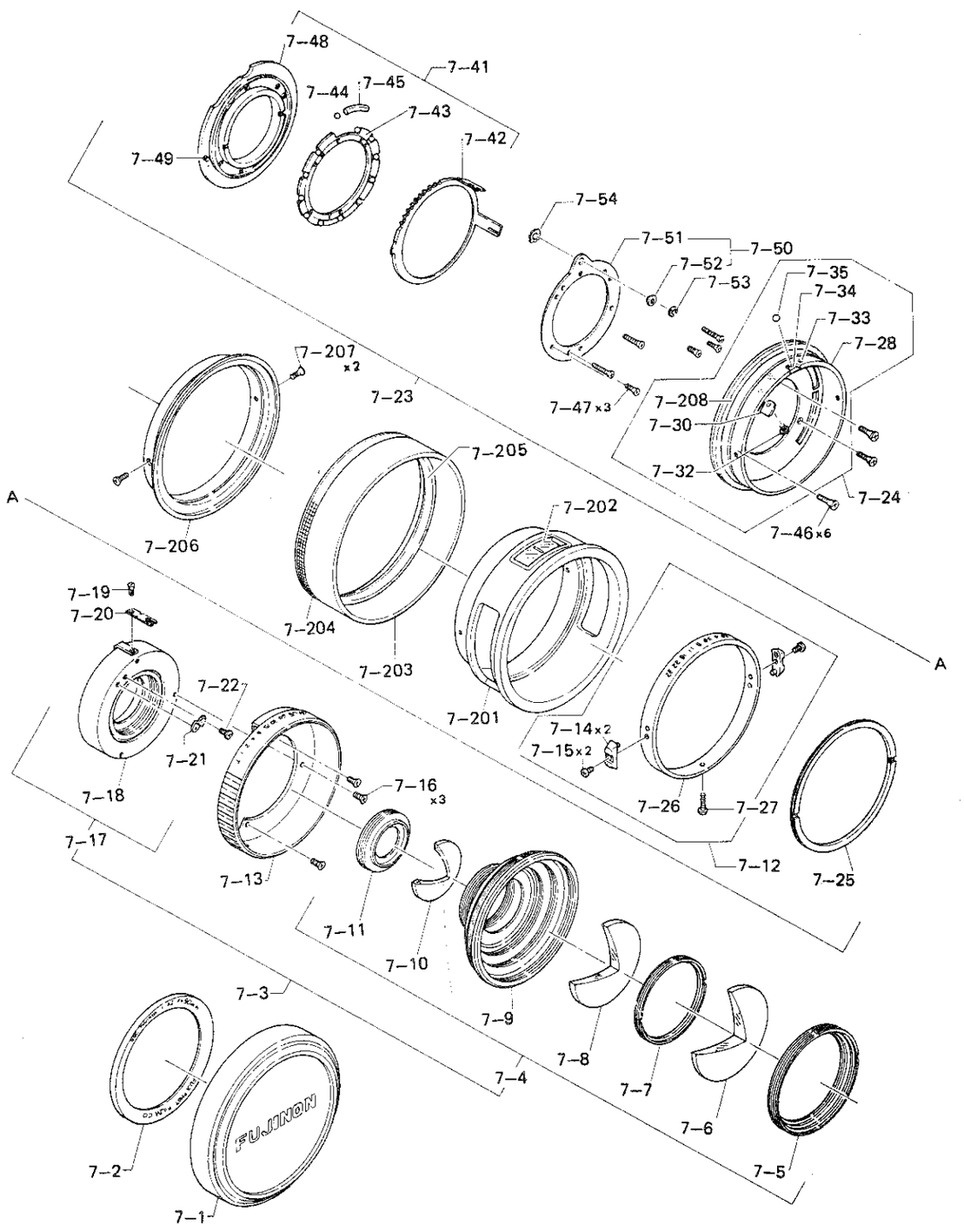
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
7 - 1	57B4387840	Lens cap	1	○	×	
7 - 2	23B2351180	Name ring	1	○	○	
7 - 3	38A4387950	Shutter assembly (II)	1	×	×	
7 - 4	21A2351210	Front lens assembly	1	○	×	
7 - 5	23B2351140	Hold ring	1	×	○	
7 - 6	1B2349990	Lens (G1)	1	×	○	
7 - 7	23B2351130	Hold ring	1	×	○	
7 - 8	1B2350000	Lens (G2)	1	×	○	
7 - 9	21B2351110	Front lens frame	1	×	○	
7 - 10	1B2350010	Lens (G3)	1	×	○	
7 - 11	23B2351120	Hold ring	1	×	○	
7 - 13	23B4390060	Shutter speed selector ring	1	○	×	
7 - 14	16B4390040	Knob	2	○	×	
7 - 15	53B4387850	Screw	2	○	×	
7 - 16	110M170303S	Screw	3	○	○	
7 - 17	38A4387960	Shutter assembly (I)	1	○	×	
7 - 18	38B2188090	0# shutter	1	×	○	
7 - 19	101M120143N	Screw	1	○	○	
7 - 20	47B1349040	Aperture lever	1	○	○	
7 - 21	109B35870	Contact	1	○	○	
7 - 22	110M140121N	Screw	1	○	○	
7 - 23	324A4389902	Lens barrel assembly	1	○	×	
7 - 24	23A4389940	Index ring assembly	1	○	×	
7 - 25	23B2188620	Hold ring	1	○	○	
7 - 26	23B4390050	Aperture selector ring	1	○	×	
7 - 27	110M200601S	Screw	1	○	○	
7 - 28	23B4390070	Index ring	1	×	×	
7 - 30	110B4389700	PCB	1	○	×	
7 - 31	108B24300	Lug	1	×	○	
7 - 32	110M170181S	Screw	1	○	○	
7 - 33	170M15018F	Rivet	1	×	○	
7 - 34	50B2188550	Leaf spring	1	×	○	

Fig. 7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5. Disassembling the front mask assembly (7 - 84)

5 - 1 Remove the spring (7 - 108), remove the guide shaft (7 - 109) and screw (7 - 107), and remove the release lever assembly (7 - 98).

5 - 2 Remove two screws (7 - 96), and remove the cover assembly (7 - 68) including the front shutter release (7 - 88).

5 - 3 Remove two screws (7 - 90), and remove the shutter actuation counter assembly (7 - 93).

6. Disassembling the helicoid (7 - 62)

6 - 1 Mark the male and female threads by means of a pen or scriber first.

NOTE: The helicoid combining position has been set, and male and female threads must be combined in the original position when reassembling.

6 - 2 Feed the helicoid out toward the close - up distance side to remove the male helicoid (7 - 67).

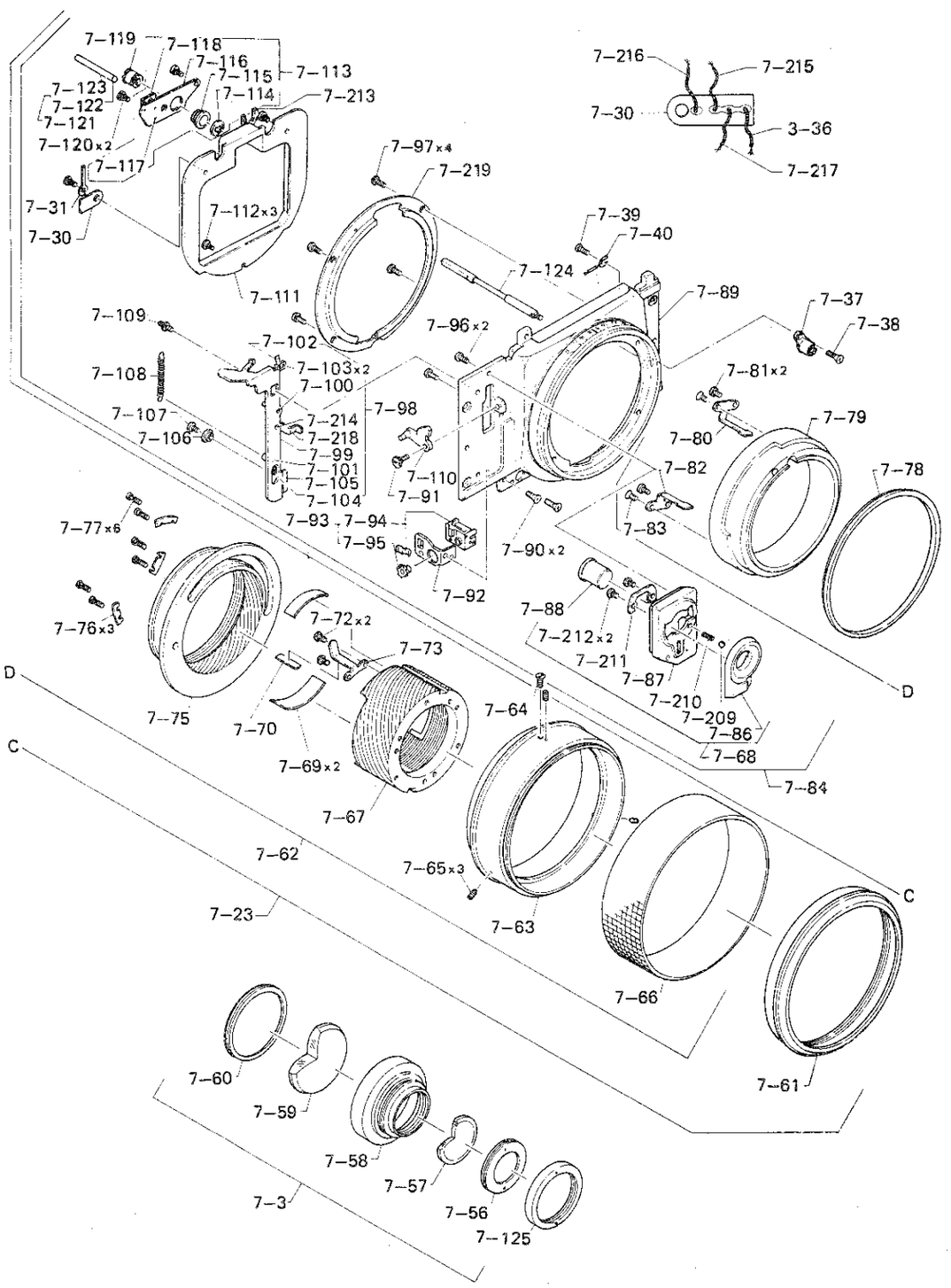
NOTE: Handle the helicoid carefully so as not to damage the threads.

6 - 3 Remove three thrust plates (7 - 76), and remove the hold ring (7 - 79), helicoid ring (7 - 75) and ring (7 - 78).

NOTE: Memorize the helicoid disassembling sequence for a convenience at the time of reassembly.

REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
7 - 35	200M20	Steel ball	1	○	○	
7 - 37	112A3281051	Synchrosocket assembly	1	○	○	
7 - 38	111M170251N	Screw	1	○	○	
7 - 39		Screw	1	○	○	
7 - 40	108B3281790	Lug	1	○	○	
7 - 41	23A4389930	Shutter frame assembly	1	○	×	
7 - 42	34B2188520	Set plate	1	×	○	
7 - 43	23B2188740	Ring	1	×	○	
7 - 44	200M20	Steel ball	12	×	○	
7 - 45	24B2188510	Spacer	12	×	○	
7 - 46	111M200901S	Screw	6	○	○	
7 - 47	111M170451S	Screw	3	×	○	
7 - 48	23B4389640	Shutter frame	1	×	×	
7 - 49	17B2188500	Stopper pin	1	×	○	
7 - 50	47A2188920	Holder assembly	1	○	○	
7 - 51	47B2188530	Holder	1	×	○	
7 - 52	42B99361	Shaft holder	1	○	○	
7 - 53	191M12	E - clip	1	○	○	
7 - 54	34B2188380	Gear	1	○	○	
7 - 55	21A2351220	Rear lens frame assembly	1	○	×	
7 - 56	23B2351160	Hold ring	1	×	○	
7 - 57	1B2350020	Lens (G4)	1	×	○	
7 - 58	21B2351151	Rear lens frame	1	×	○	
7 - 59	1B2350030	Lens (G5)	1	×	○	
7 - 60	23B2351170	Hold ring	1	×	○	
7 - 61	23B2188660	Focusing ring (II)	1	○	○	
7 - 62	21A4389920	Helicoid assembly	1	○	×	
7 - 63	23B2188640	Focusing ring (I)	1	○	○	
7 - 64	53B2188810	Screw	1	○	○	
7 - 65	120M200301S	Set screw	3	○	○	
7 - 66	59B2188690	Knurled ring	1	○	○	
7 - 67	21B2188440	Male helicoid	1	×	○	

Fig. 7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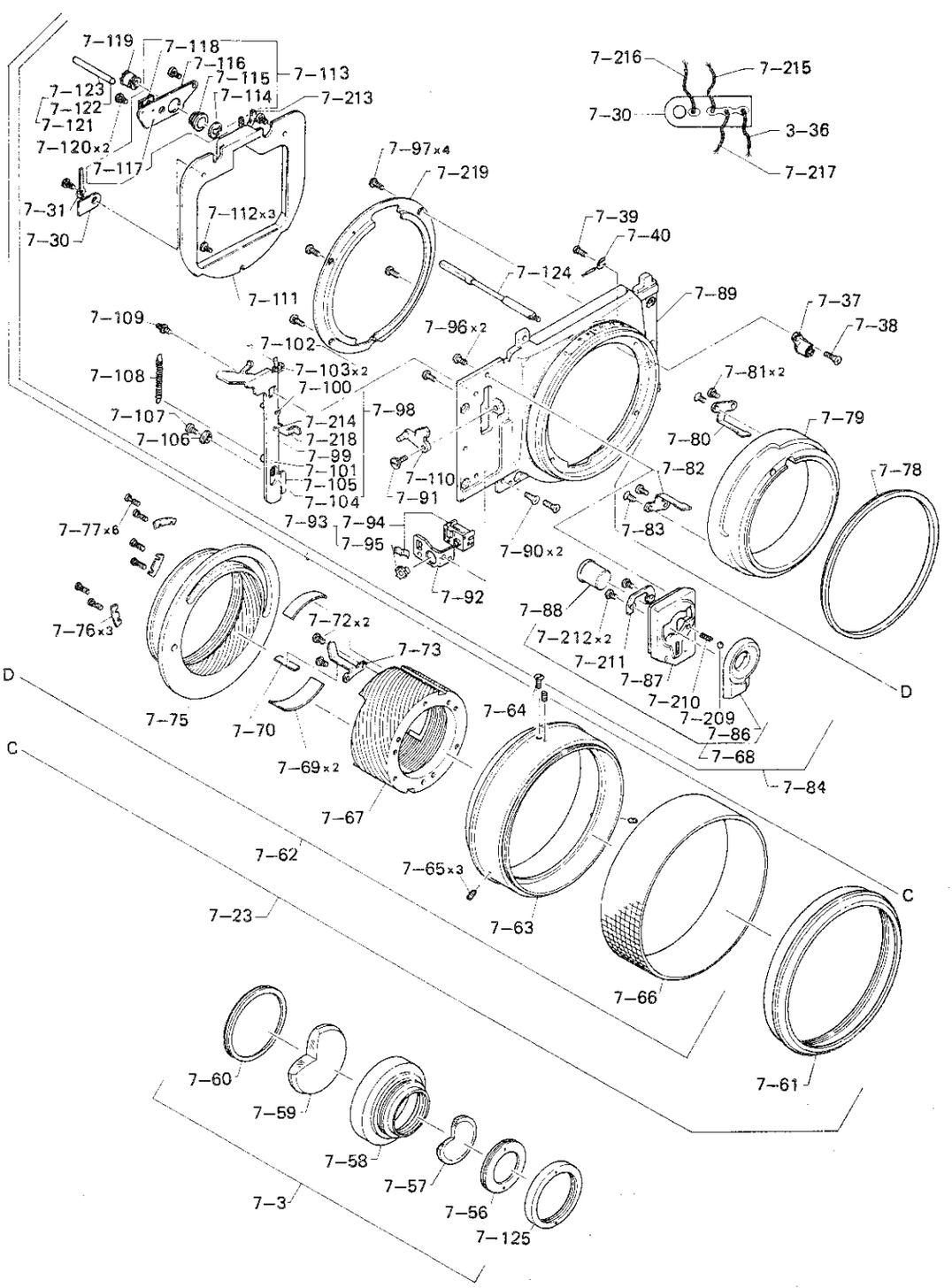
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
7 - 68	12A4389960	Cover assembly	1	○	×	
7 - 69	27B4390120	Plate (II)	2	○	○	
7 - 70	27B4390110	Plate (I)	1	○	○	
7 - 72	110M140351S	Screw	2	○	○	
7 - 73	47B2188670	Interlock plate	1	○	○	
7 - 75	23B4389650	Helicoid ring	1	×	×	
7 - 76	47B2188450	Thrust plate	3	○	○	
7 - 77	17B2188460	Set screw	6	○	○	
7 - 78	23B2188420	Ring	1	×	○	
7 - 79	23B4389660	Hold ring	1	×	×	
7 - 80	30B2188470	Helicoid guide (I)	1	○	○	
7 - 81	111M200503S	Screw	2	○	○	
7 - 82	30B2188480	Helicoid guide (II)	1	○	○	
7 - 83	110M200503S	Screw	2	○	○	
7 - 84	46A4389911	Front mask assembly	1	○	×	
7 - 86	47B4389590	Front shutter release ring	1	×	×	
7 - 87	12B4389580	Cover	1	×	×	
7 - 88	16B2188200	Front shutter release	1	○	○	
7 - 89	46B4389500	Front mask	1	×	×	
7 - 90	111M170351S	Screw	2	○	○	
7 - 91	32B2188220	Shaft	1	○	○	
7 - 92	41B2188760	Angle	1	×	○	
7 - 93	322A2188980	Shutter actuation counter assembly	1	○	○	
7 - 94	322B2188980	Shutter actuation counter	1	×	○	
7 - 95	34B2188770	Ratchet wheel	1	×	○	
7 - 96	113M170301S	Screw	2	○	○	
7 - 97	110M260603S	Screw	4	○	○	
7 - 98	47A4389950	Release lever assembly	1	○	×	
7 - 99	47B4389690	Release lever	1	×	×	
7 - 100	17B2188270	Pin	1	×	○	
7 - 101	17B2188280	Pin	1	×	○	
7 - 102	47B2188730	Release lever	1	×	○	

Fig. 7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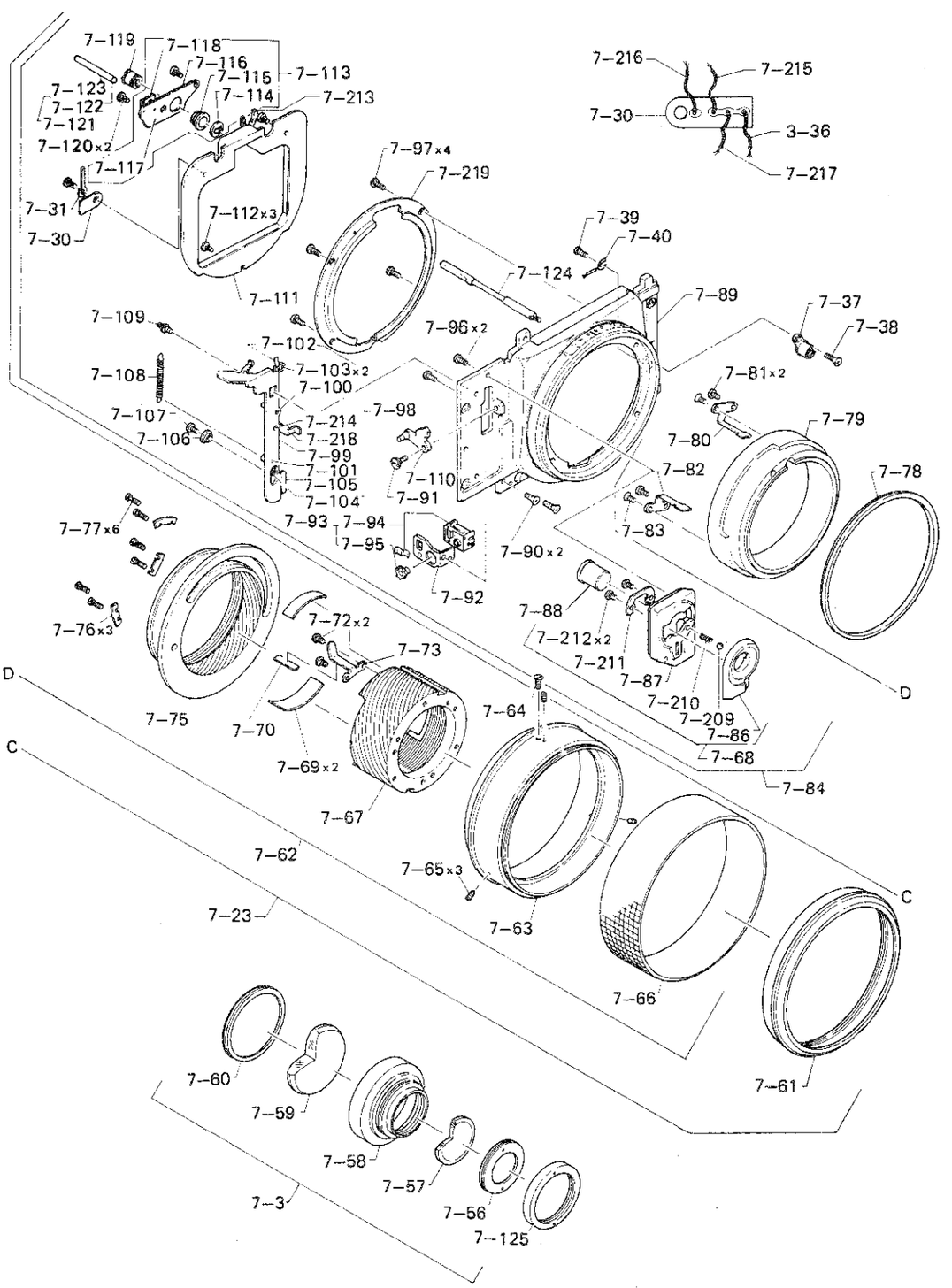
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
7 - 103	170M12023F	Rivet	2	X	O	
7 - 104	170M12018F	Rivet	2	X	O	
7 - 105	45B2188750	Claw	1	X	O	
7 - 106	32B488080	Guide shaft	1	O	O	
7 - 107	110M200401S	Screw	1	O	O	
7 - 108	50B2188300	Spring	1	O	O	
7 - 109	32B2188290	Guide shaft	1	X	O	
7 - 110	47B2188210	Lever	1	O	O	
7 - 111	27B4389670	Light shielding mask	1	O	X	
7 - 112	110M170301S	Screw	3	O	O	
7 - 113	46B2188880	Position plate assembly	1	O	O	
7 - 114	191M050T	E - clip	1	O	O	
7 - 115	32B2188340	Bushing	1	X	O	
7 - 116	46B2188310	Positioning plate	1	X	O	
7 - 117	170M15025F	Rivet	2	X	O	
7 - 118	46B2188320	Shaft holding plate	1	X	O	
7 - 119	34B2188350	Gear	1	O	O	
7 - 120	110M200401S	Screw	2	O	O	
7 - 121	17A2189150	Interlock rod assembly	1	O	O	
7 - 122	200M24	Steel ball	1	X	O	
7 - 123	17B2189140	Interlock rod	1	X	O	
7 - 124	32B2188370	Gear shaft	1	O	O	
7 - 125	23B402810	Hold ring	1	X	O	
7 - 201	23B4390000	Protector ring	1	O	X	
7 - 202	81B4390031	Index window	1	O	X	
7 - 203	23B4390010	Hood	1	O	X	
7 - 204	59B4390080	Hood cover	1	O	X	
7 - 205	51B4390090	Velveteen	1	O	X	
7 - 206	23B4390100	Stopper ring	1	O	X	
7 - 207	53B4387850	Screw	2	O	X	
7 - 208	27B2188820	Moquette	1	O	O	
7 - 209	200M24	Steel ball	1	O	O	

Fig. 7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REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW690	
7 - 210	50B4389620	Spring	1	○	×	
7 - 211	86B4389600	Stopper	1	○	○	
7 - 212	113M170301S	Screw	2	○	×	
7 - 213	27B4389710	Moquette	1	○	×	
7 - 214	170M15025F	Rivet	1	×	○	
7 - 215	111B4387880	Lead wire (black)	1	○	×	
7 - 216	111B4387910	Lead wire (gray)	1	○	×	
7 - 217	111B4387870	Lead wire (black)	1	○	×	
7 - 218	85B4389610	Stopper	1	○	×	
7 - 219	12B4389680	Cover plate	1	○	×	

FUJI PHOTO FILM CO., LTD.

FUJICA TECHNICAL BULLETIN

NO. G69-101

DATE. August 10, 1983

MODEL Fujica GW690, GSW690, G617

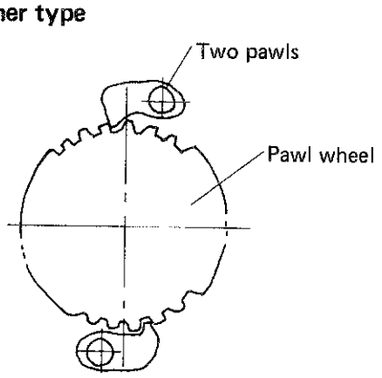
SUBJECT Parts change

DESCRIPTION

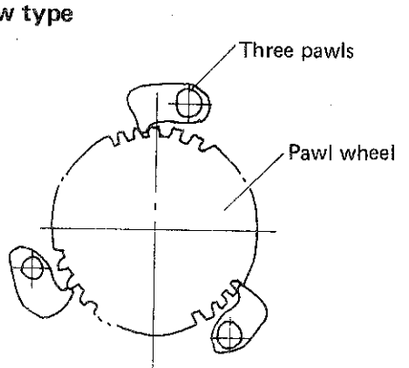
To improve film advancing performance, parts configurations have been changed as shown below:

1) The new pawl wheel has teeth in three sections.
2) The new disc assembly uses three pawls.

Former type



New type



(4-12A)

The camera which uses the new type can be identified by the yellow mark in the tripod socket.

The above change has been effected on those manufactured during July, 1983 and thereafter.

PARTS SUPPLY INFORMATION — Technical Bulletin No. G69-101

FORMER TYPE						NEW TYPE			
REF NO.	PARTS NO.	PARTS NAME	QTY	NO LONGER SUPPLIED	CONTINUOUSLY SUPPLIED	REF NO.	PARTS NO.	PARTS NAME	QTY
4-12	85A719480	Disc assembly	1	○		4-12A	85A719482	Disc assembly	1
4-18	85B489550	Pawl	2		○	4-18	85B489550	Pawl	3

REMARKS:

FUJI PHOTO FILM CO., LTD.

FUJICA TECHNICAL BULLETIN

NO. G69-104

DATE. May 27, 1985

MODEL Fujica GW690 and GSW690

SUBJECT Prevention of flare

DESCRIPTION

To prevent occurrence of a flare, the following actions have been taken.

I. CAUSE

The light reflected from the floor between an object and the camera enters the camera through the lens. This light further reflects at the range finder interlock lever, and reaches the film causing a flare.

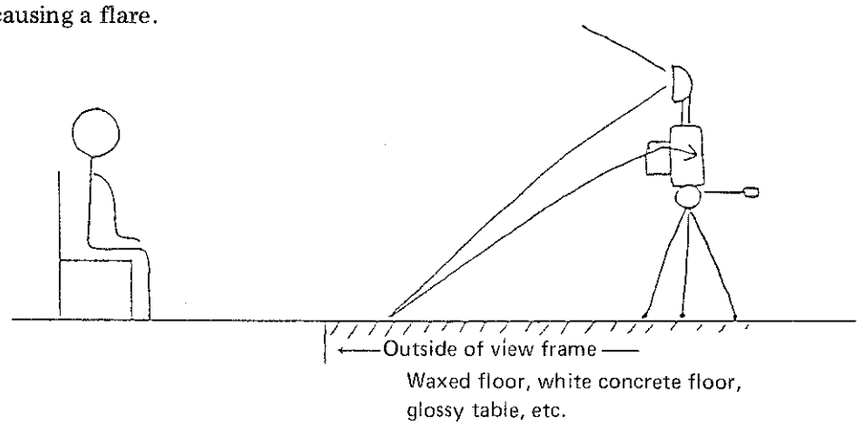


Fig. 1

II. ACTIONS TO BE TAKEN

a) Two light shielding plate assemblies (7-68) are removed. (See Fig. 5.)

b) Two pieces of tape (Part No. 27B4390121; Trade name: Fine Shut II) are sticked. (See Figs. 2 and 3.)

c) One piece of tape (Part No. 27B4390111; Trade name: Fine Shut I) is sticked to the interlock plate (7-73). (See Fig. 2.)

d) Four screws (110M140251S) are screwed into the screw holes used to install two light shielding plate assemblies (7-68). (To keep the neat appearance.)

e) For Fujica GSW690, one piece of tape (Part No. 27B4390111; Trade name: Fine Shut I) to the interlock plate (7-73). (See Fig. 4.)

III. OTHERS

The above actions are taken on GW690II and GSW690II from the beginning.

For identification, a white dot is painted on the bottom of the tripod screw hole.

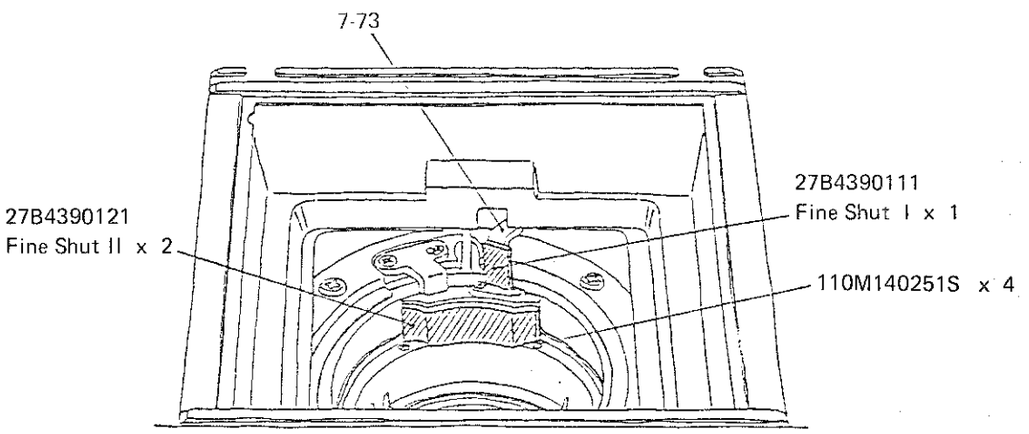


Fig. 2

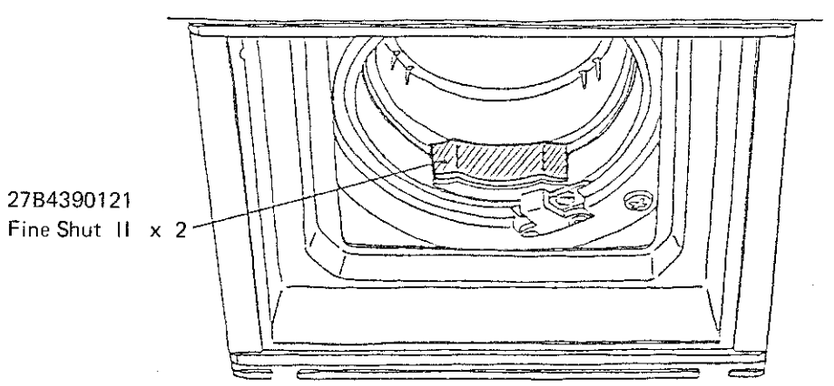


Fig. 3

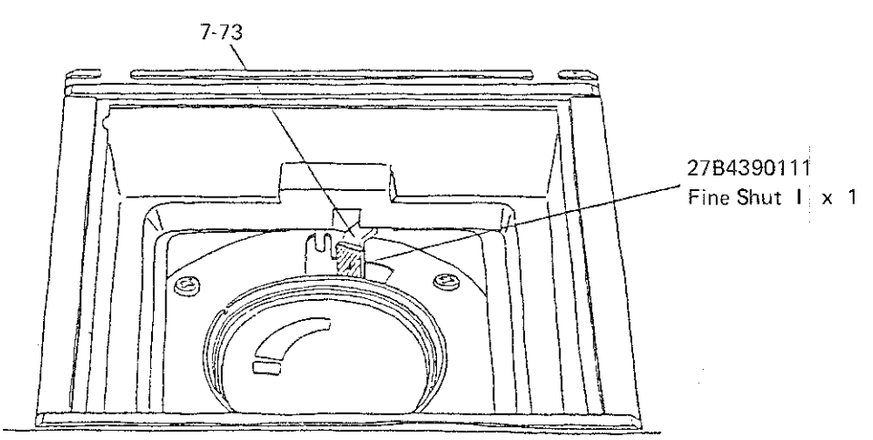
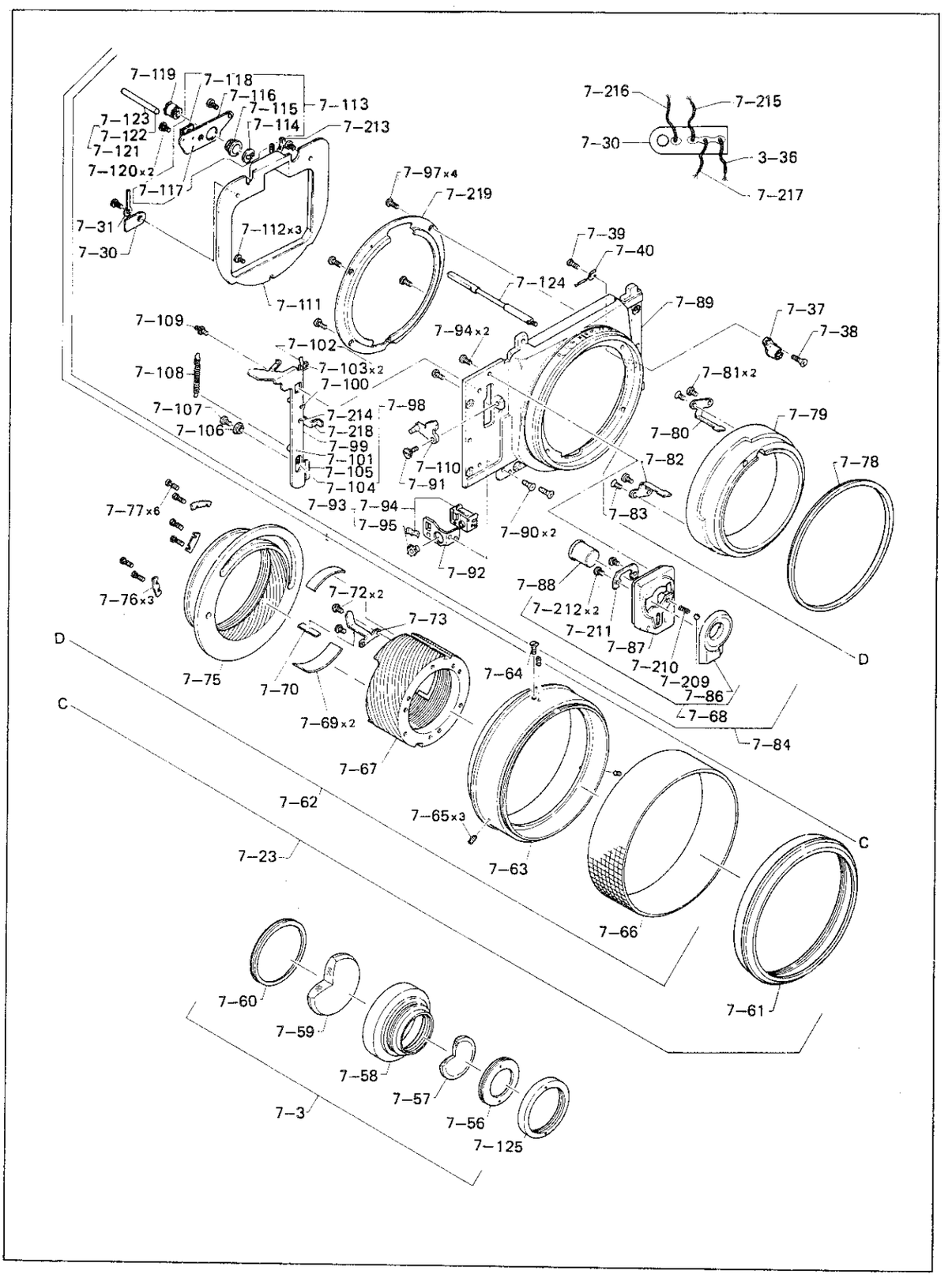


Fig. 4 GSW690

Fig. 3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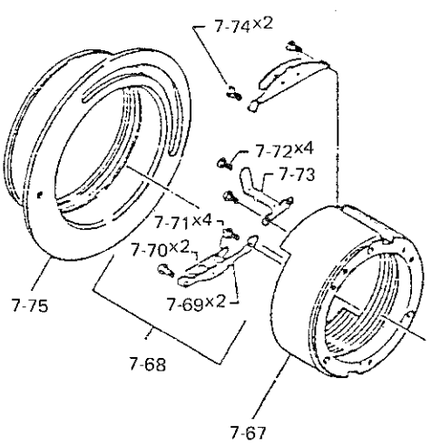


Fig. 5

7. Disassembling the film take-up mechanism assembly (4-1)

7-1 Disassembling the lever assembly (4-88) and dial assembly (4-93)

1) Remove two screws (4-94) and screw (4-109), and remove the dial (4-95) and spacer (4-96).

2) Remove the spring (4-81) and spring (4-5) from the guide shaft (4-44), remove the screw (4-40), and remove the gear (4-42).

3) Remove the screw (4-92), nut (4-75) [left hand thread], and gear (4-76) [left hand thread], pull out the dial assembly (4-93) and rotary plate assembly (4-77) slowly, and remove the spring (4-101) from the dial assembly (4-93) and stopper pin (4-104).
Now, remove the gear assembly (4-60).

4) Remove the spring (4-87) and screw (4-86), and remove the lever assembly (4-88).

7-2 Disassembling the setting mechanism assembly

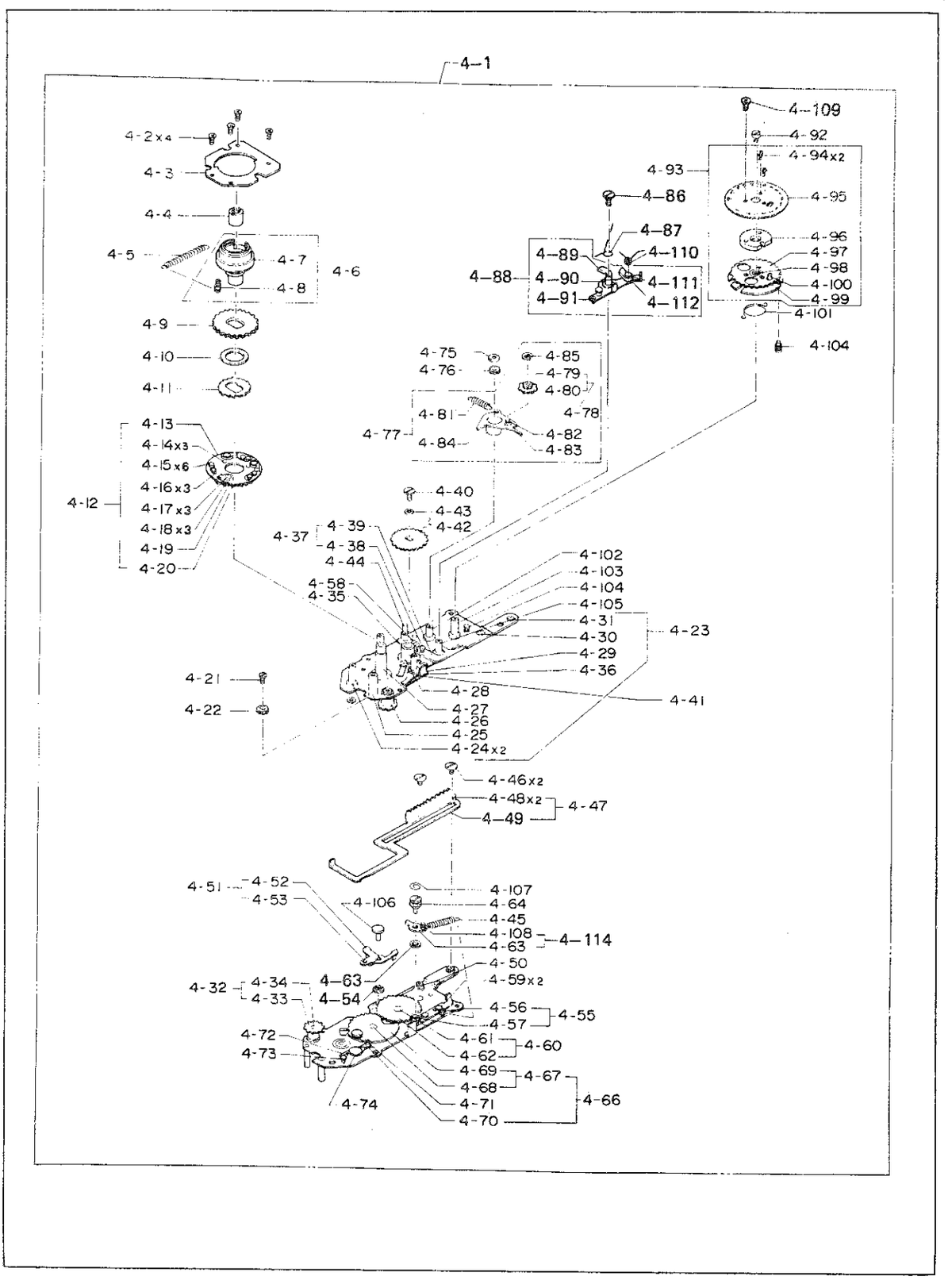
1) Remove two screws (4-46), remove the rack assembly (4-47), and pull out the ratchet wheel assembly (4-66).

2) Remove four screws (4-2), remove the base plate (4-3), and pull out the gear train consisting of the sleeve assembly (4-6), gear (4-9), washer (4-10), ratchet wheel (4-11) and disc assembly (4-12).

NOTE: All of these parts will come out together as they are fitted tightly and lubricated with grease.

3) Remove the screw (4-21) and gear (4-22), and remove the gear assembly (4-32).

Fig. 4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III REASSEMBLY AND ADJUSTMENT

1. Reassembling the lens barrel assembly (7 - 23)

1 - 1 Reassembling the helicoid

NOTE: When the helicoid assembly is reassembled with dust existed on the threads and sliding portions, the helicoid will not operate smoothly. Before reassembling the helicoid assembly, thoroughly clean the threads and sliding portions, and apply the designated grease.

1) Apply the ring (7 - 78) to the helicoid ring (7 - 75), apply grease (FHA-027 Squirrel Grease) to the sliding portion against the hold ring, fit the hold ring (7 - 79), and install three thrust plates (7 - 76) with six set screws (7 - 77).

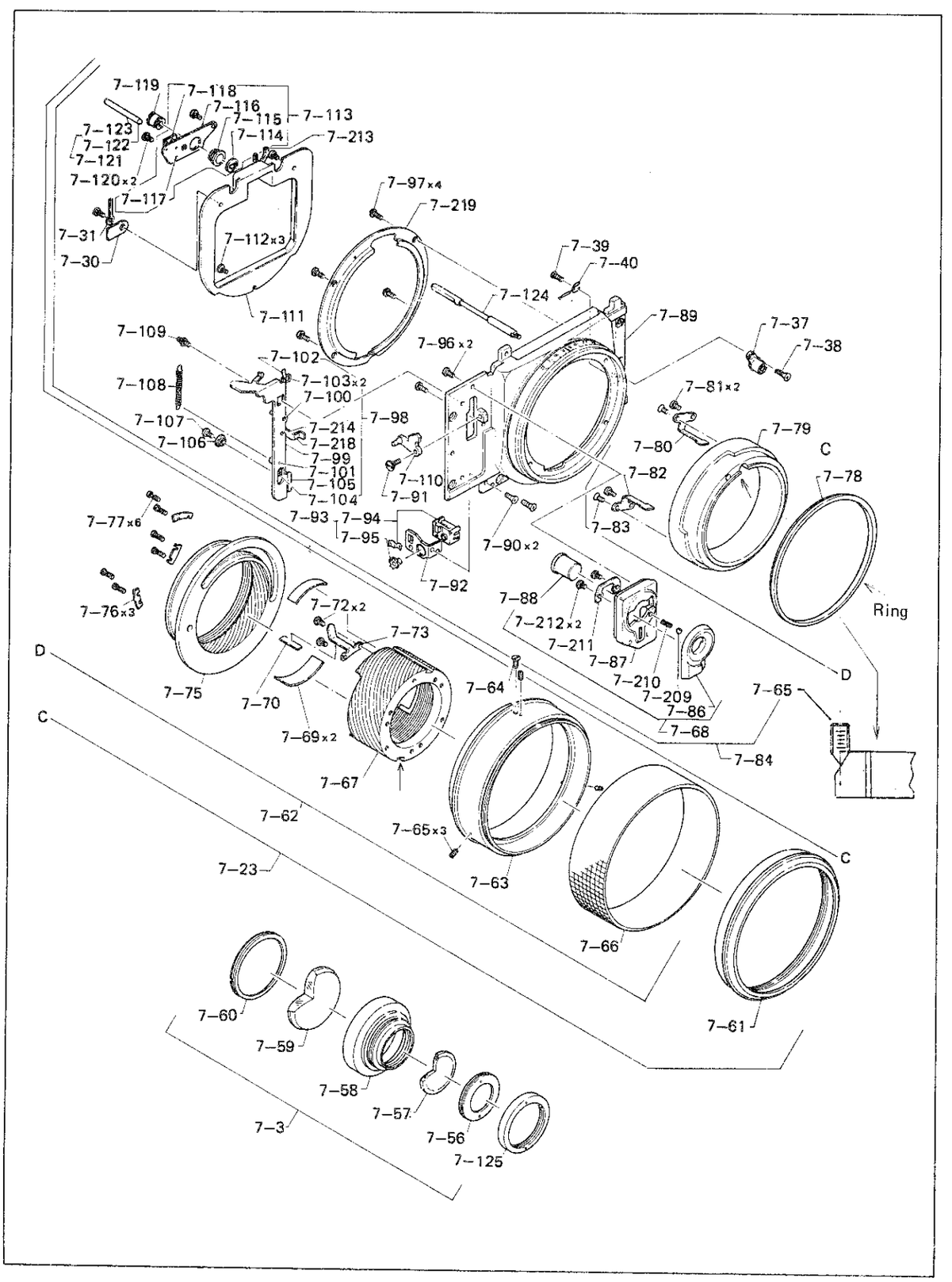
NOTE: Face the rough surface of the thrust plate upward.

Make sure that the helicoid operates smoothly.

2) Apply grease (FHA-100 Losoid Grease 83410) to the threads of the helicoid, screw the male helicoid (7 - 67) into the helicoid ring, insert the helicoid guide (I) (7 - 80) and helicoid guide (II) (7 - 82) to the groove (A) on the male helicoid (7 - 67), and secure the helicoid guide (I) (7 - 80) and helicoid guide (II) (7 - 82) respectively with two screws (7 - 81) and two screws (7 - 83).

3) When the helicoid does not operate smoothly, disassemble it again, and check it for existence of dust and scar, tilted guide and other defectiveness.

Fig. 5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1 - 2 Installing the shutter frame assembly (7 - 41)

1) Match the hole (B) of the holder (7 - 51) with the groove (C) of the hold ring (7 - 79), and install the shutter frame assembly (7 - 41) on the helicoid assembly with three screws (7 - 46).

2) Apply the gear shaft (7 - 124) to the groove (C) of the hold ring (7 - 79) in the posture shown in Fig. 6, apply the gear (7 - 54) to the gear shaft, insert the shaft head into the hole (B) of the holder (7 - 51), apply the shaft holder (7 - 52), and secure it with the E - clip (7 - 53).

1 - 3 Installing the focusing ring (I) (7 - 63) and index ring assembly (7 - 24)

1) Set the helicoid to its infinite position, fit the focusing ring with the ∞ marked faced upward, and install the screw (7 - 64).
Next, install the focusing ring with three set screws (7 - 65) temporarily, set it in the position where the stopper stops at the infinite and close - up distances.

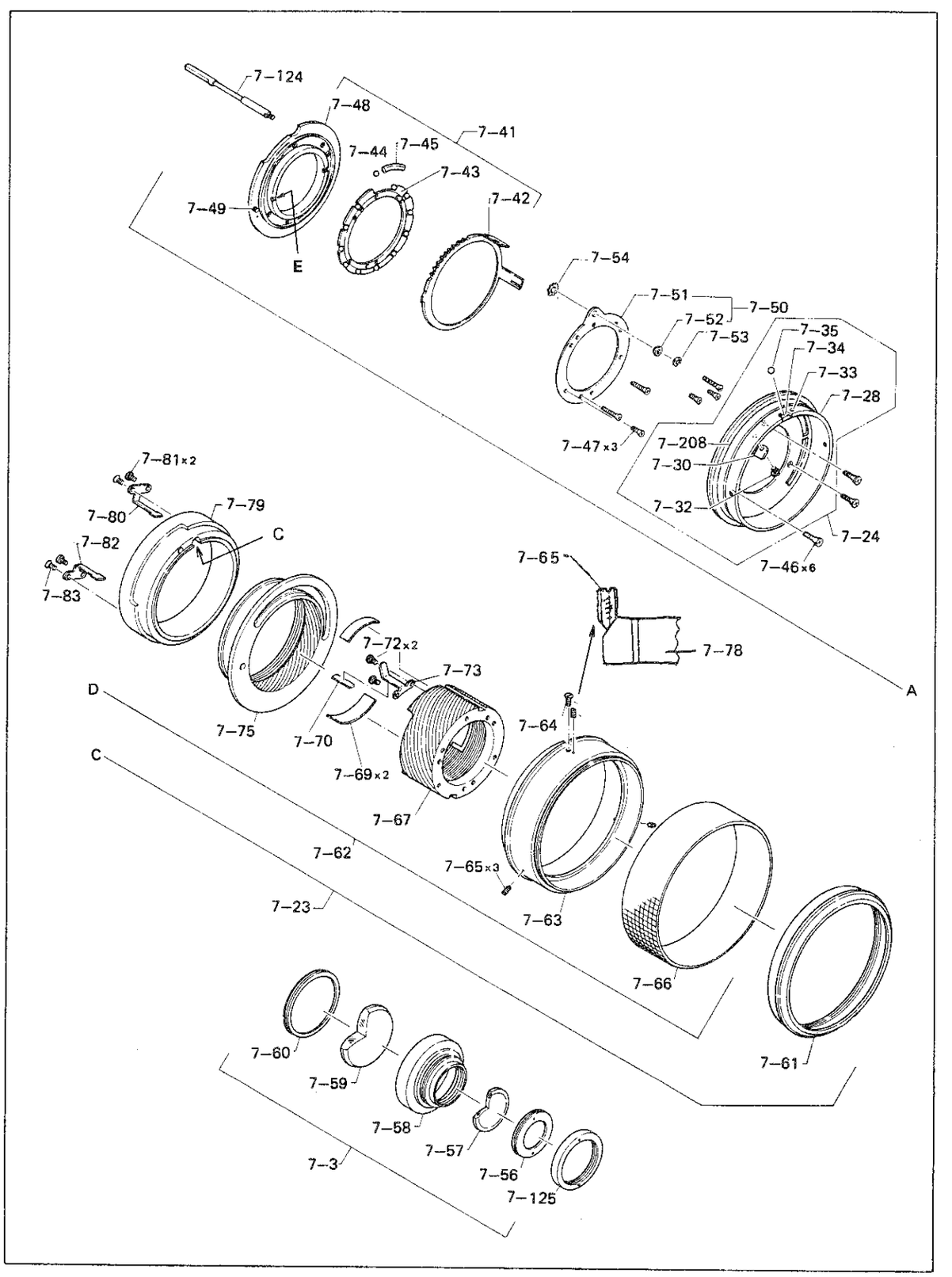
NOTE: Head of the set screw (7 - 65) must come into contact with the slope on the ring (7 - 78).

2) Install the index ring assembly (7 - 24) with three screws (7 - 46), make sure that the moquette (7 - 208) is not damaged and installed on the index ring correctly, and then, screw the focusing ring (II) (7 - 61) into the focusing ring (I) (7 - 63).

1 - 4 Installing the hood (7 - 203) and protector ring (7 - 201)

Fit the hood (7 - 203) to the protector ring (7 - 201), and with the index window (7 - 202) faced upward, install them with two screws (7 - 207) together with the stopper ring (7 - 206).
Make sure that the hood comes in and out smoothly.

Fig. 6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7-52
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7-33
7-28
7-47×3
7-208
7-30
7-32
7-24
7-46×6
7-81×2
7-80
7-79
7-82
C
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7-65×3
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7-57
7-56
7-3
7-125

1 - 5 Installing the aperture selector ring (7 - 26)

1) Fit the steel ball (7 - 35) to the index ring (7 - 28), apply grease (FHA-100) to the steel ball and surroundings (sliding portion against the aperture selector ring), apply grease to the click portion (I) of the aperture selector ring (7 - 26) slightly, fit the aperture selector ring to the index ring, and screw the hold ring (7 - 25) to secure them.

2) Install two knobs (7 - 14) on the aperture selector ring with two screws (7 - 15). Turn the aperture selector ring, and make sure that it turns smoothly and it clicks at each aperture effectively.

3) Install the screw (7 - 27) on the aperture selector ring through the long groove (b) of the index ring. Pass through the lead wires (7 - 216 and 7 - 217) through the hole, and hold the lead wier ends on the PCB (7 - 30).

1 - 6 Installing the shutter

1) With the shutter set lever set, fit two positioning pins on the back of the shutter to the shutter positioning groove (E) of the shutter frame (7 - 48), and after checking the position, tighten it with the hold ring (7 - 125).

NOTE: Be careful not to hold the lead wires between the parts.

Insert the screw (7 - 27) into the groove of the aperture lever (7 - 20), and make sure that the screw head is projected 0.5 to 1 mm.

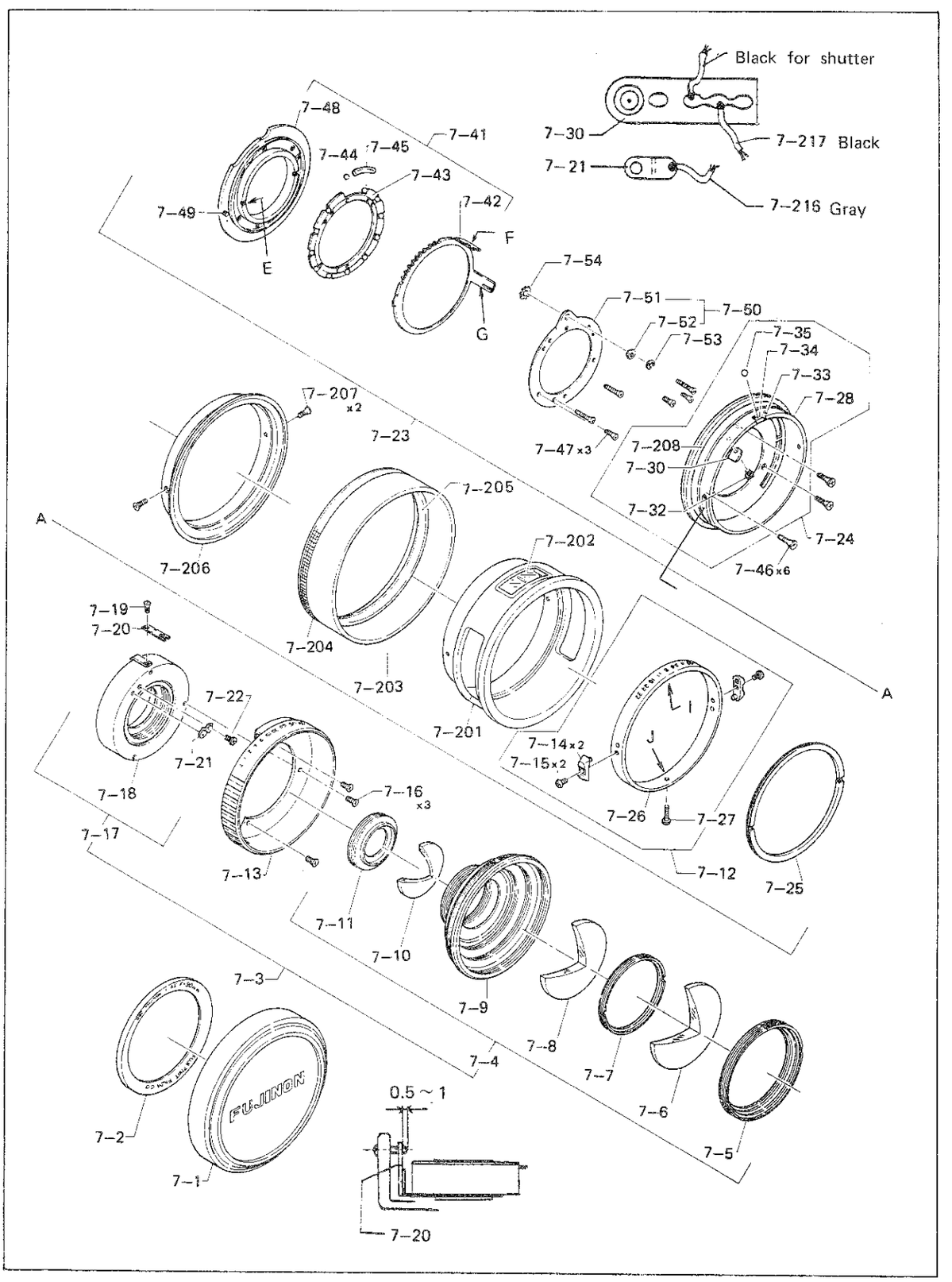
2) Turn the gear shaft (7 - 124), and make sure that the shutter can be charged and released respectively when the gear shaft is turned to the right and left.

When adjustments of shutter charge and release are required, properly open or close portions F and G of the set plate (7 - 42).

1 - 7 Connecting the lead wires

Connect the black lead wire (7 - 217) and lead wire extended from the shutter to the PCB (7 - 30), and connect gray lead wire (7 - 216) to the contact (7 - 21) of the shutter by means of a soldering.

Fig. 7


Black for shutter
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7-41
7-30
7-217 Black
7-44
7-45
7-43
7-21
7-216 Gray
7-49
7-42
F
E
G
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7-28
7-207 x2
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7-46 x6
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1 - 8 Assembling the front mask assembly (7 - 84)

1) Apply the front shutter release (7 - 88) to the cover assembly (7 - 68), and install them on the front mask (7 - 89) with two screws (7 - 96). Make sure that the shutter release moves smoothly.

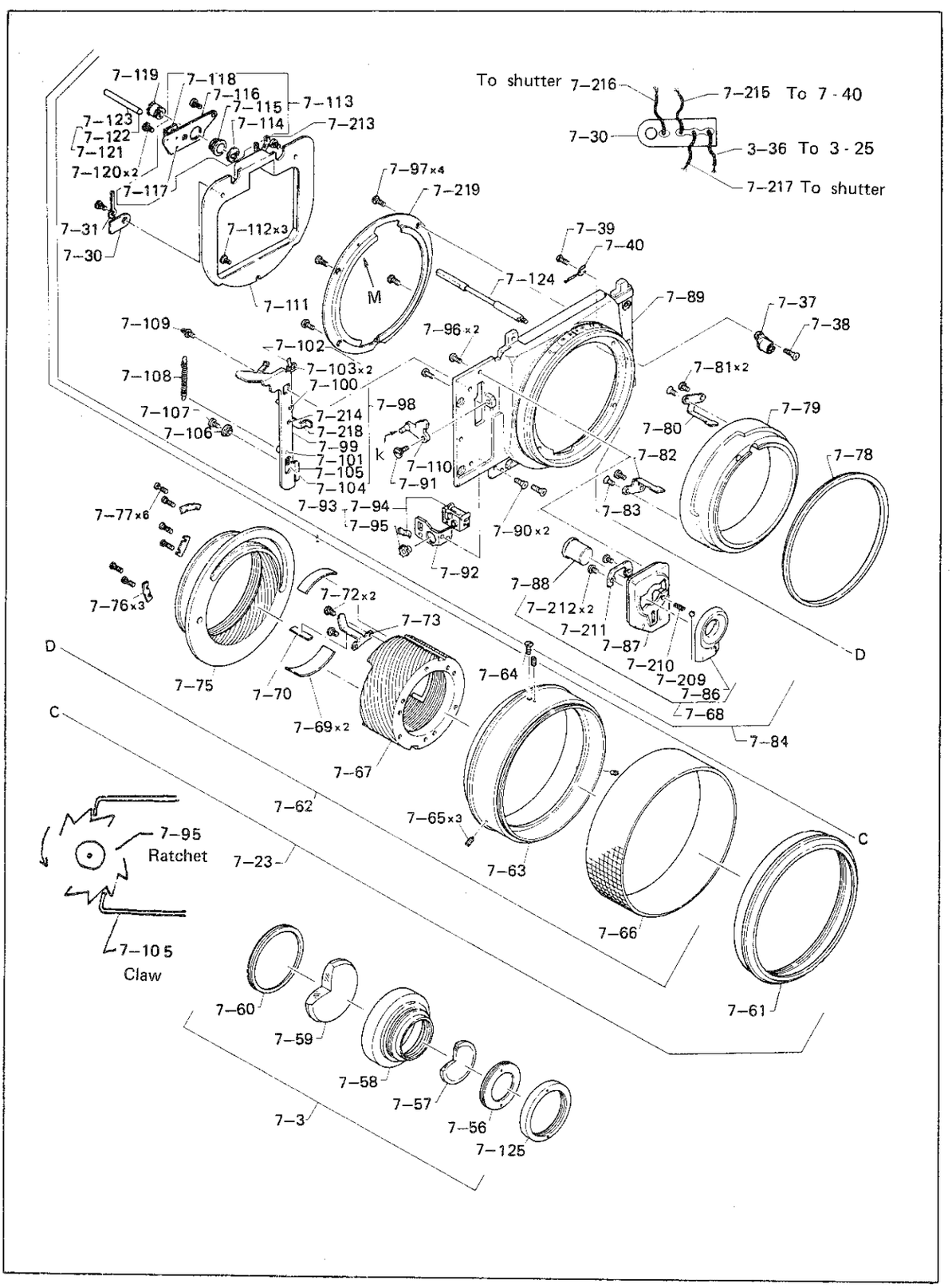
2) Apply the pin (7 - 100) of the release lever assembly (7 - 98) beneath the portion (K) of the lever (7 - 110), and install the guide shaft (7 - 109) and guide shaft (7 - 106) repectively to the upper and lower sides with the screw (7 - 107). Make sure that the release lever assembly (7 - 98) operates by its own weight.
Apply the spring (7 - 108) to the pin (7 - 101) and guide shaft (7 - 109).

3) Install the shutter actuation counter assembly (7 - 93) on the front mask assembly (7 - 84) with two screws (7 - 90).

NOTE: Be careful not to deform the claw (7 - 105).

Adjust the head of the claw (7 - 105) so that the ratchet wheel (7 - 95) advances one tooth when the shutter release is depressed once and the last one digit of the exposure counter advances one number when the shutter release is depressed ten times.

Fig. 8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7-112×3
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7-97×4
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7-102
7-96×2
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7-103×2
7-100
7-81×2
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7-90×2
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7-212×2
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7-76×3
7-72×2
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7-84
7-69×2
7-67
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7-65×3
7-63
7-66
7-95
Ratchet
7-23
7-105
Claw
7-60
7-59
7-58
7-57
7-56
7-125
7-3
7-61
To shutter 7-216
7-215 To 7-40
7-30
3-36 To 3-25
7-217 To shutter
D
C

1 - 9 Combining the front mask assembly (7 - 84) with the helicoid assembly (7 - 62)

1) Place the front mask assembly (7 - 84) on the helicoid assembly (7 - 62), apply the lead wire through the hole (M) of the cover plate (7 - 219), and install the cover plate (7 - 219) with four screws (7 - 97) together with the front mask assembly (7 - 84). Tighten the screws securely.
(Tightening torque : About 7 kg - cm)

2) Install the interlock plate (7 - 73) on the male helicoid (7 - 67) with two screws (7 - 72).

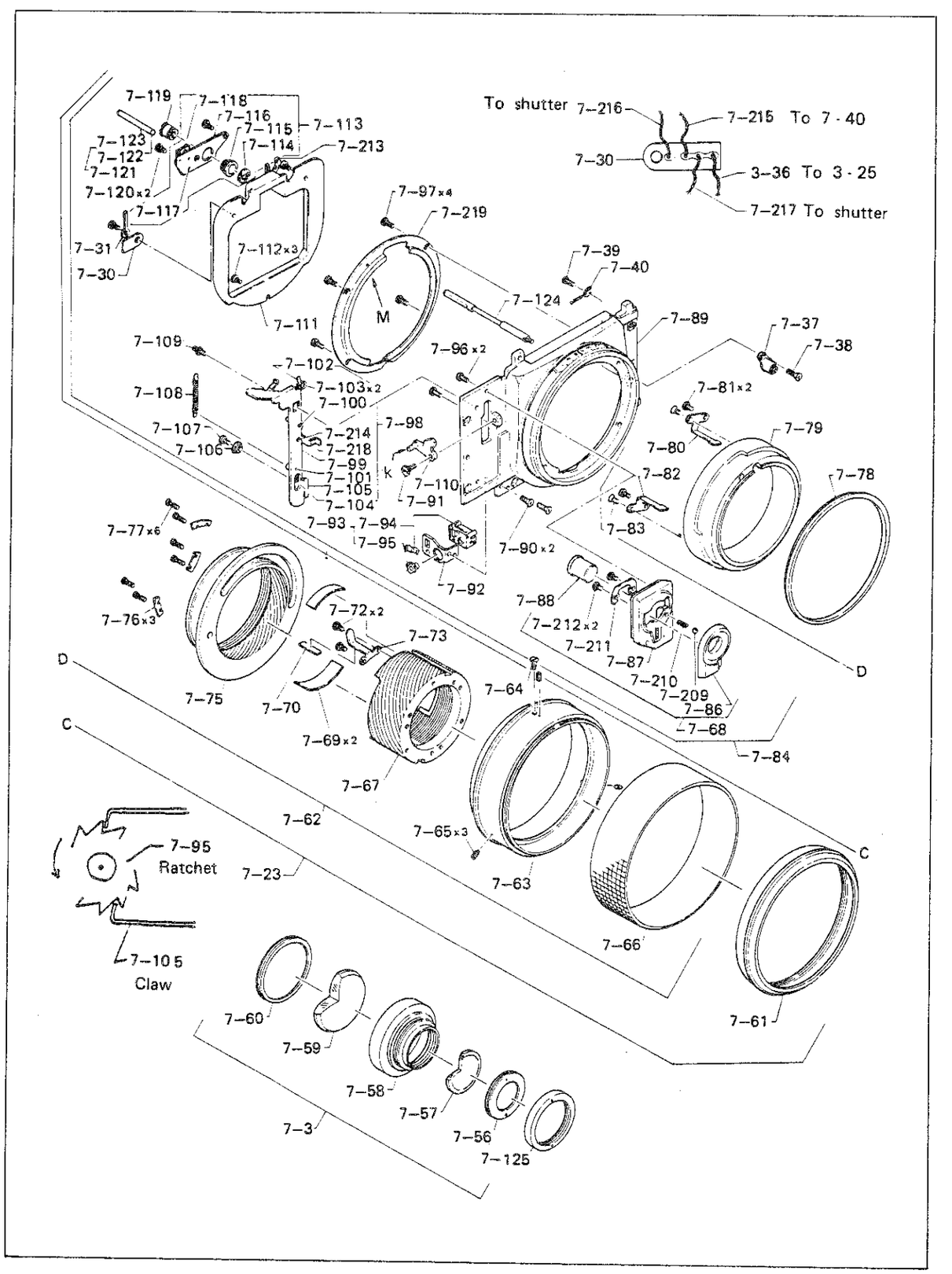
3) Pass the lead wire through the hole (m) of the light shielding mask (7 - 111), apply the PCB (7 - 30) and lug (7 - 40), and tighten three screws (7 - 112).
Connect the lead wires to the PCB (7 - 30) by means of a soldering.

4) Installing the positioning plate assembly (7 - 113)

Install the moquette (7 - 213) to cover up the gap between the front mask assembly (7 - 84) and light shielding mask (7 - 111) with adhesive.
Now, insert the gear shaft (7 - 124) into the hole of the gear (7 - 119) of the positioning plate assembly (7 - 113), and install the positioning plate assembly (7 - 113) with two screws (7 - 120).

5) Connect the lead wire (7 - 215) to the PCB (7 - 30) and synchrocontact (7 - 39) by the use of a soldering iron, and after passing the lead wire through the space between the front mask assembly (7 - 84) and light shielding mask (7 - 111), secure the lead wire with a piece of tape at the middle.

Fig. 9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7-102
7-96×2
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To shutter
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7-215 To 7-40
7-30
3-36 To 3-25
7-217 To shutter
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7-76×3
7-75
7-72×2
7-73
7-70
7-69×2
7-67
7-64
7-88
7-212×2
7-211
7-87
7-210
7-209
7-86
7-68
7-84
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7-62
7-65×3
7-63
7-66
7-61
7-95
Ratchet
7-23
7-105
Claw
7-60
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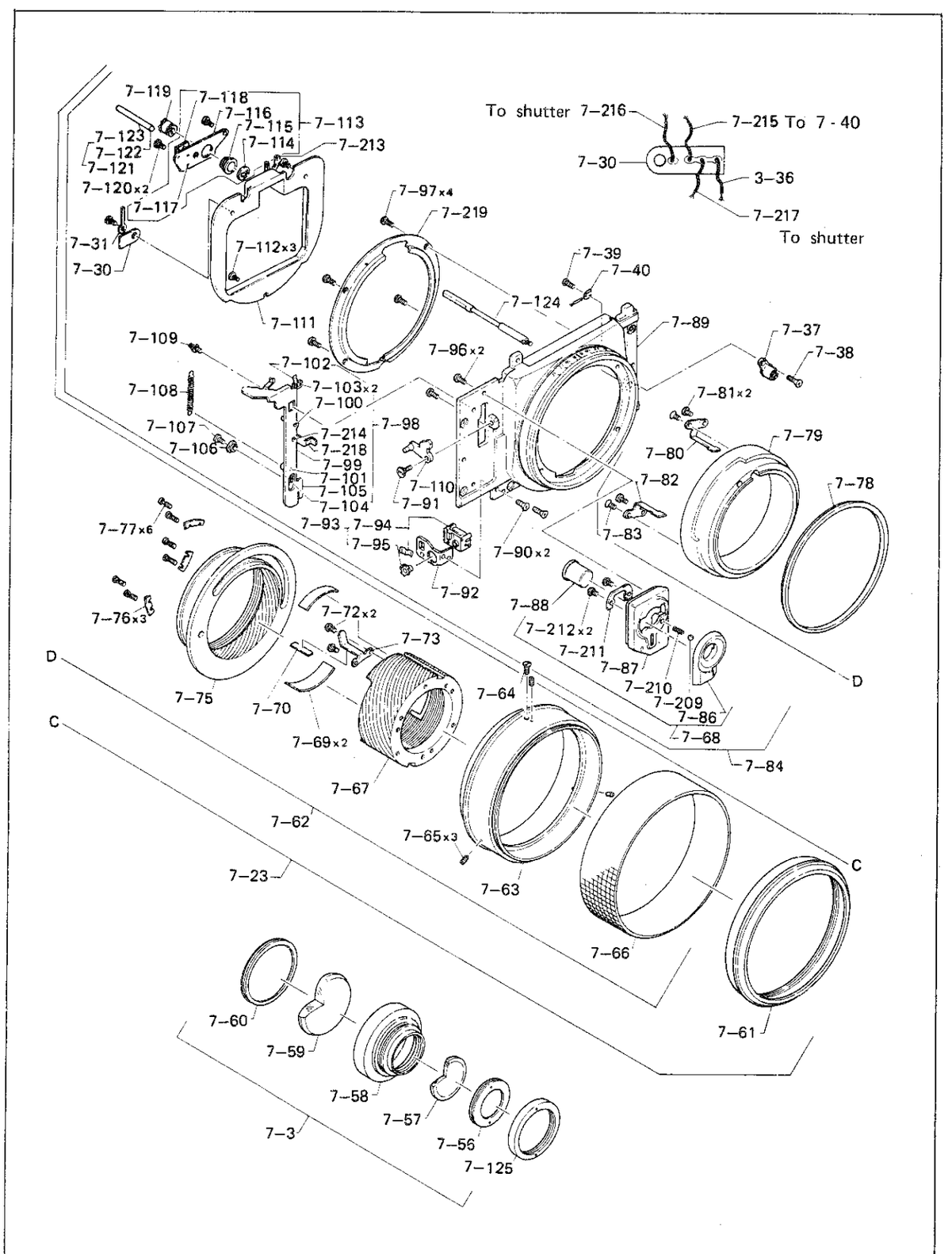
7-125
7-3

1 - 10 Checking

Check the following parts for their operations and functions.

1) The helicoid for smooth operation
2) The aperture selector ring for smooth operation and click at each aperture.
3) The shutter speed selector ring for smooth operation
4) The hood ring coming in and out motions
5) The shutter for charging and releasing, and opening of the sector
6) The shutter release and lever for operations
7) The exposure counter for the function (The last digit must advance one number when the shutter is released 10 times.)
8) The shutter release for the locking function
9) The synchronizing system for continuity and insulation (Test by the use of a tester.)
10) Each screw for tightness
11) The appearance of the camera.

Fig. 10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7-103x2
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To shutter 7-216
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To shutter
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7-83
7-90x2
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7-212x2
7-211
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7-86
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7-84
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D
C

1 - 11 Installing the lens assembly (7 - 3), front lens assembly (7 - 4), knurled ring (7 - 66) and hood cover (7 - 204)

1) Thoroughly clean insides of the lens and shutter by means of a blower or Freon.

2) Apply adhesive slightly to the threads of the lens (about two positions at point of 1 to 2 mm diameter), and install the lens assembly (7 - 3) and front lens assembly (7 - 4) securely.

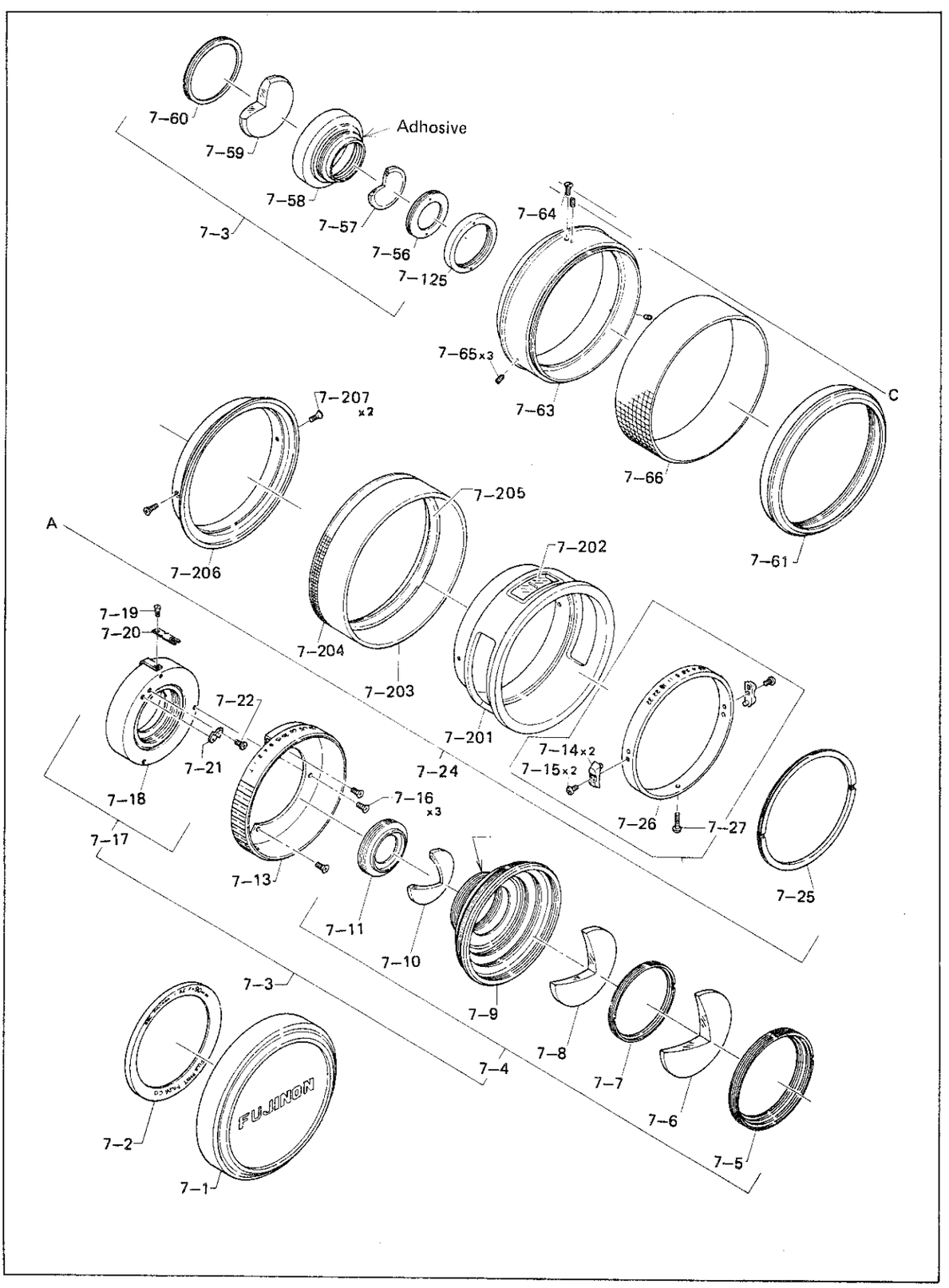
1 - 12 Apply adhesive slightly to the focusing ring (I) (7 - 63) and hood cover (7 - 204) at the surface where the knurled rings are installed, and install the knurled rings.

NOTE: The knurled rings must be installed correctly without slackness, and the adhesive should not come out.

1 - 13 After installing the lenses and leathers, check the focusing ring, aperture selector ring and shutter speed selector ring for their smooth operations.

NOTE: The knurled ring (7 - 66) may be installed after assembling the camera completely because the set screws (7 - 65) may have to be tightened at the time of focus adjustment.

Fig. 11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FUJINON

2. Assembling the film take - up mechanism assembly (4 - 1)

The film take - up mechanism assembly has been greased (FHA054) and no additional greasing may be required when reassembling it. However, make sure that each gear is free from dust and foreign matter. In the event that a gear is dropped onto the floor or other dusty place, thoroughly clean it with cleaning agent, and apply grease (FHA054) sufficiently before assembling the film take - up mechanism assembly.

2 - 1 Assembling the film take - up gear train

1) Remove three springs (4 - 16) from the disc assembly (4 - 12), and with three pawls (4 - 18) spreaded and with the gear (4 - 9), washer (4 - 10) and ratchet wheel (4 - 11) applied to the sleeve (4 - 7), install them on the disc assembly (4 - 12).

2) Hook three springs (4 - 16) to the arbors, and apply the longer end of the spring to the groove on the back of the pawl.
Turn the sleeve clockwise, and make sure that the springs are effective, the ratchet sounds correctly and it does not turn reversely.

3) Fit the gear assembly (4 - 32) to the sleeve (4 - 26) from the bottom, apply the gear (4 - 22) from the top, and tighten the screw (4 - 21).
[Tightening torque : 3.5 kg - cm]

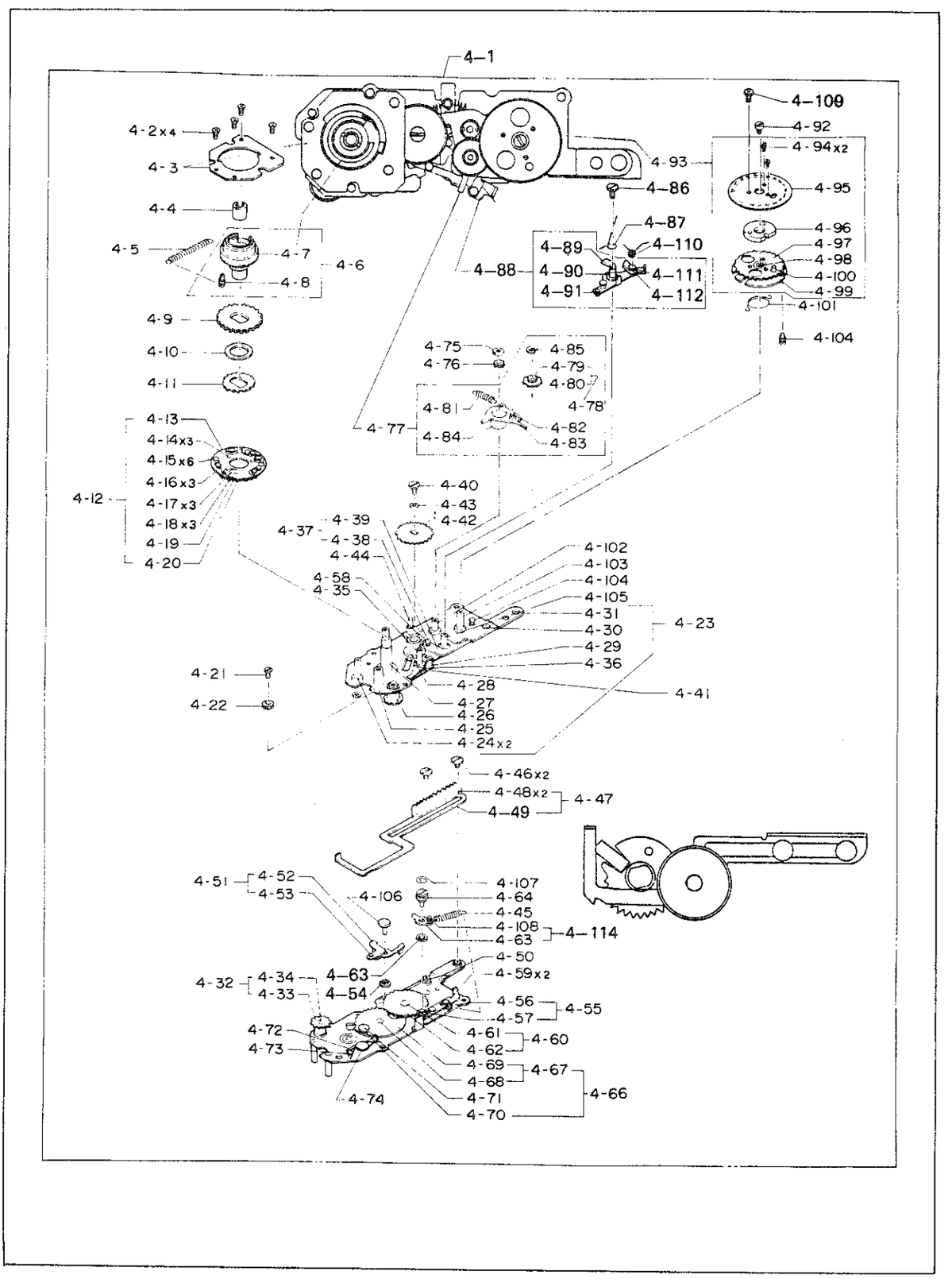
4) Fit the disc assembly (4 - 12) to the sleeve (4 - 27), and secure it with the nut (4 - 4).
Make sure that the disc assembly and gear assembly turn smoothly.

5) Fit the ratchet wheel assembly (4 - 67) to the sleeve (4 - 28) from the bottom of the base plate, fit the rack (4 - 49) to the shafts (4 - 31) and (4 - 50) at the position where the shaft (4 - 71) enters inside of the rack (4 - 49), and tighten two screws (4 - 46).
Make sure that the rack (4 - 49) operates smoothly.

6) Fitting the interlock pin (4 - 91) of the lever assembly (4 - 88) to the groove on the pawl (4 - 36), fit the lever assembly (4 - 88) to the lever shaft (4 - 105), and tighten the screw (4 - 86).

7) Apply the spring (4 - 87) from the top of the screw, and hook one end and the end of the spring (4 - 87) to the shaft (4 - 111) and pin (4 - 38).

Fig. 12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2 - 2 Assembling the exposure counter assembly

1) Apply the gear (4 - 80) to the gear shaft (4 - 82) of the rotary plate assembly (4 - 77), and secure it with the E - clip (4 - 85).

2) Apply the spring (4 - 101) to two stopper pins (4 - 104), insert the rotary plate assembly (4 - 77) in between the counter gear (4 - 97) of the dial assembly (4 - 93) and disc (4 - 99), apply both of them to the shaft holder (4 - 102) and shaft (4 - 103), and push them into the deepest position with the return lever (4 - 39) fully pushed in.
Thus, the rotary plate, lever assembly (4 - 88) and return lever (4 - 39) can be correctly positioned.

3) Wind up the spring (4 - 101) one turn, and secure the dial assembly (4 - 93) with the screw (4 - 92).
Next, apply the gear assembly (4 - 60) to the shaft holder (4 - 102) from the bottom, and install the gear (4 - 76) and nut (4 - 75). Now, lock the nut on the shaft with screw locking agent.
Apply the smaller hook and larger hook of the spring (4 - 81) respectively to the hole on the lever and guide shaft (4 - 44).

2 - 3 Combining the ratchet wheel assembly (4 - 67) with the film take - up gear grain

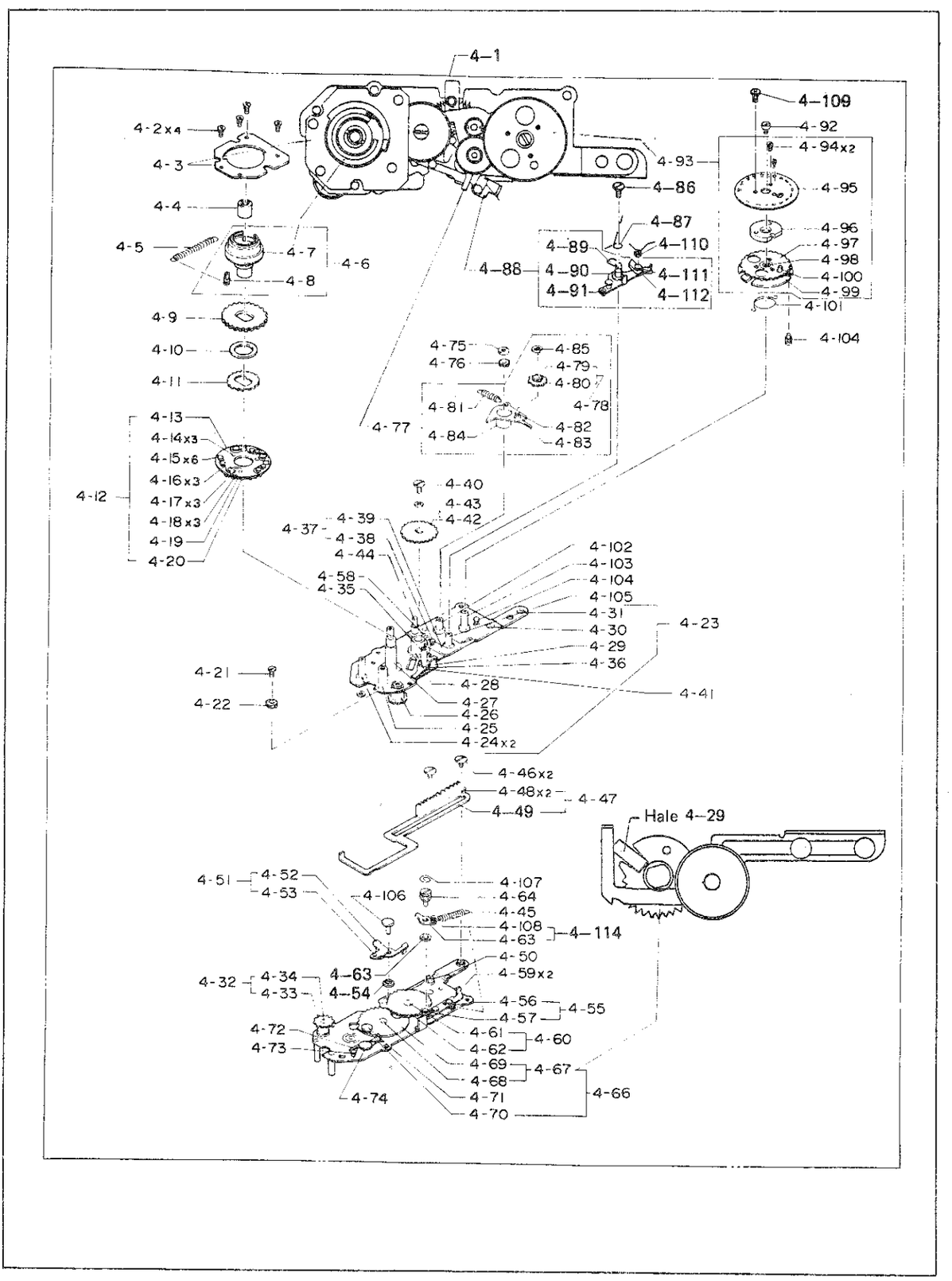
1) Apply the spring (4 - 5) to the pin (4 - 8) of the sleeve (4 - 7), and passing through the inside of the column (4 - 24), apply the other end of the spring (4 - 5) to the guide shaft (4 - 44).

2) Place the base plate (4 - 3) in its position, turn the sleeve (4 - 7) toward the film taking up direction, and tighten four screws (4 - 2) when the projection on the sleeve enters the square portion of the base plate (4 - 3).

3) Match the cut portion of the ratchet (for charging the shutter) with the square hole of the arm (4 - 29) accurately (evenly), fit the gear (4 - 42) to the shaft (4 - 68) without deviating the above matching, and after applying the washer (4 - 43) to the screw (4 - 40), install the gear (4 - 42) with the screw (4 - 40).

4) Install the dial (4 - 95) on the gear with two screws (4 - 94) and gear (4 - 109). Make sure that each gear operates smoothly, each lever operates smoothly each spring is installed correctly, each lever is not deformed, and that each screw is tightened securely.

Fig. 13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3. Assembling the chassis assembly (2 - 1)

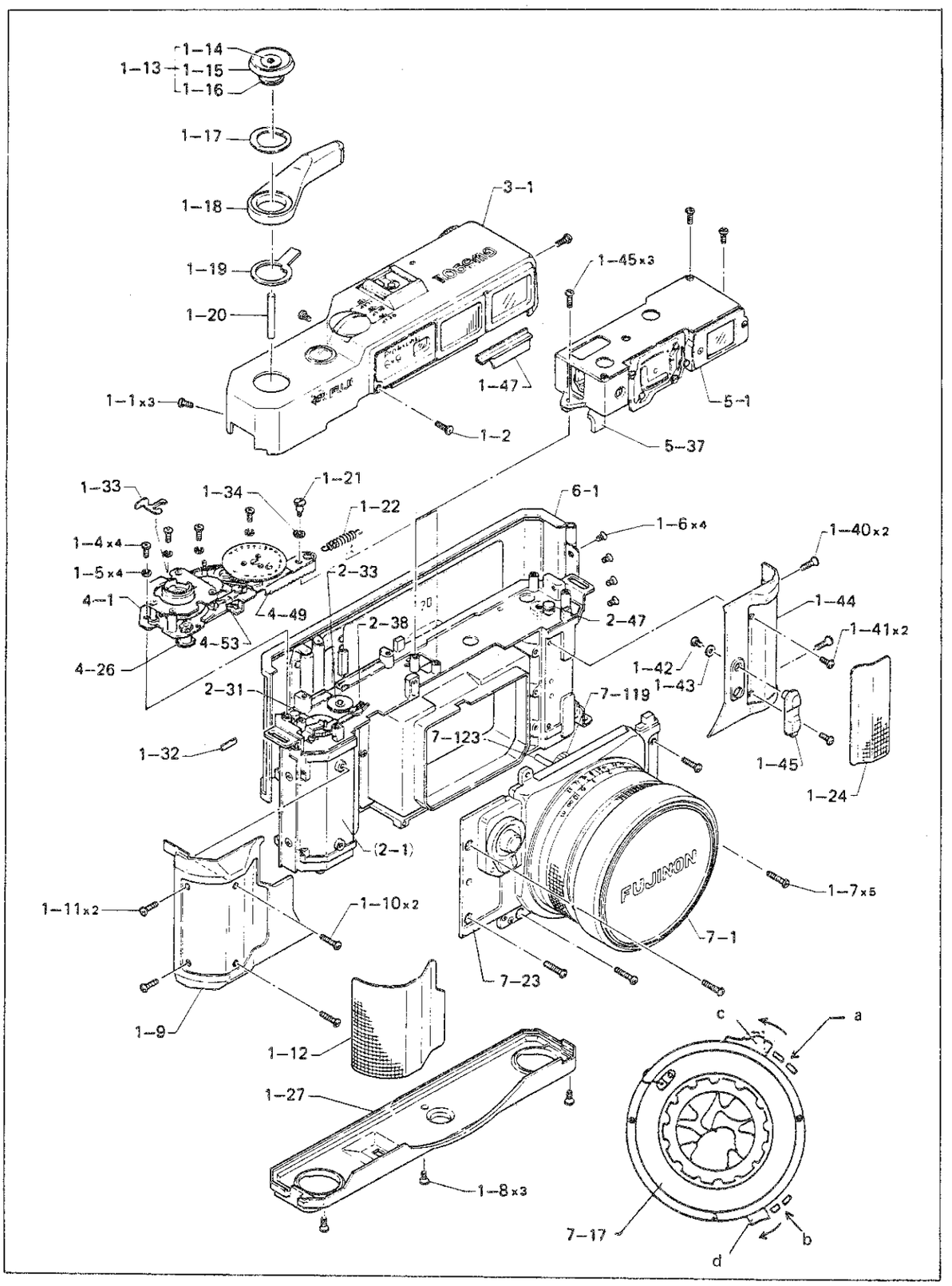
3 - 1 Installing the lens barrel assembly (7 - 23) on the chassis

1) Insert the interlock rod assembly (7 - 121) into the hole on the positioning plate assembly (7 - 113), apply grease (FHA054) to the steel ball (7 - 122) slightly, fit the lens barrel assembly (7 - 23) to the chassis, and secure it tightly with five screws (1 - 7).
(Rated tightening torque : 4.5 kg - cm)

2) Checking the flange for flatness

Remove the front lens assembly (7 - 4), screw a jig into the lens threads taking place of the front lens assembly, turn the chassis up side down, and measure four corners of the rail plane with a dial gauge to insure that the difference among four measured values is within 0.05 mm.
When the difference exceeds 0.05, apply a washer for tin foil to the lens barrel installing plane to adjust the differene so that it is within 0.05.
Out of five positions, one position must not use washer or tin foil (highest position).

Fig. 14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1-42
1-43
2-31
7-119
7-123
1-32
1-45
1-24
(2-1)
1-11x2
1-10x2
1-7x5
7-1
7-23
1-9
1-12
1-27
1-8x3
c
a
7-17
b
d

3 - 2 Installing the film take - up mechanism assembly (4 - 1)

1) Apply grease (FHA054) to the teeth of the take - up gear (2 - 31), exposure counter drive wheel (2 - 33), rack (4 - 49) and gear shaft (4 - 62) properly, and observing the conditions indicated below, fit them to the chassis. Next, secure them temporarily with four screws (1 - 4) and four spring washers (1 - 5).

A) Leave the rack in its fully drawn out position. (Figure shows the rack not drawn out.)

B) The interlock pin (4 - 53) enters the groove of the lock lever (2 - 38).

C) The exposure counter dirve wheel (2 - 33), gear shaft (4 - 62), sleeve (4 - 26) and take - up gear (2 - 31) are intermeshed.

2) Adjustment of the shutter for charging and releasing

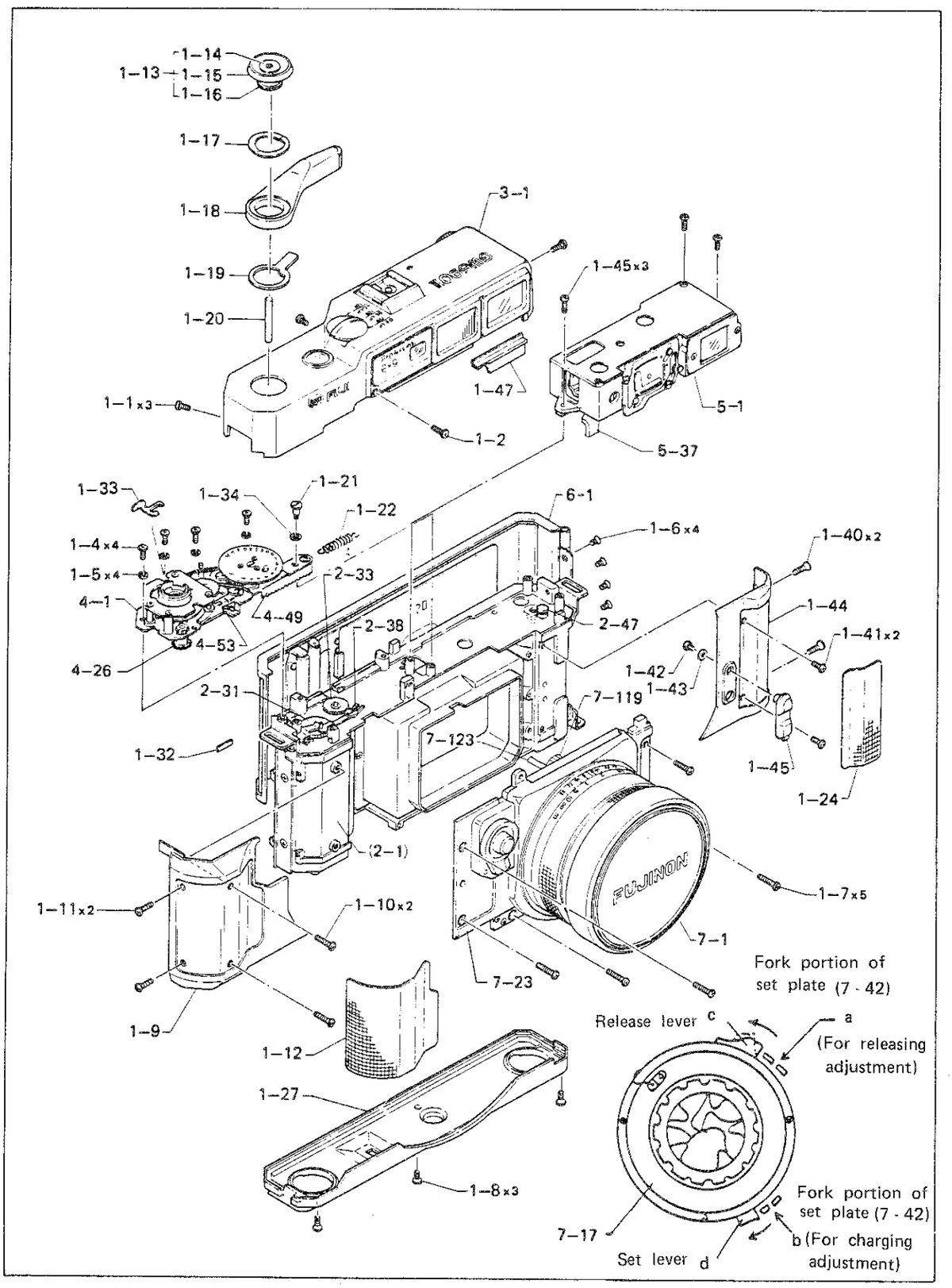
Install the film advance lever (1 - 18) temporarily, wind up the film advance lever fully to drawn in the rack (4 - 49) fully, and turn the gear (7 - 119) fully toward the shutter charging direction. Now, combine the rack (4 - 49) with the gear (7 - 119), and secure them temporarily with the set screw (1 - 21) and washer (1 - 34).
Hook the spring (1 - 22) on the screw (2 - 47) and pin (4 - 48).

3) Move the rack head vertically, adjust play of the rack (4 - 49) and gear (7 - 119) by the use of a washer (1 - 34) so that the play is about 0.05 mm, and then, tighten the set screw (1 - 21) and four screws (1 - 4) securely. (Rated tightening torque : 3 kg - cm)
Repeat charging and releasing the shutter, and make sure that the shutter is charged and released smoothly and correctly.
When adjusting the shutter for the charging and releasing operations, remove the front lens and shutter speed selector ring, and checking positions of the set plate (7 - 42) and set/release levers of the shutter, combine the rack (4 - 49) and gear (7 - 119) properly and adjust the fork space of the release lever.

4) Installing the shutter speed selector ring (7 - 13) and front lens assembly (7 - 4)

Install the shutter speed selector ring (7 - 13) on the shutter with three screws (7 - 16), clean the interior of the front lens assembly, and after applying screw locking agent slightly to the threads, screw the front lens assembly securely.

Fig. 15


1-14
1-13
1-15
1-16
1-17
1-18
1-19
1-20
3-1
1-45x3
1-47
5-1
1-1x3
1-2
5-37
1-33
1-34
1-21
1-22
6-1
1-6x4
1-40x2
1-4x4
1-5x4
4-1
2-33
4-49
2-38
2-47
1-44
1-41x2
4-53
4-26
1-42
1-43
2-31
7-119
7-123
1-32
1-45
1-24
(2-1)
1-11x2
1-10x2
1-7x5
7-1
7-23
1-9
1-12
1-27
1-8x3
Fork portion of set plate (7 - 42)
Release lever
c
a
(For releasing adjustment)
Fork portion of set plate (7 - 42)
7-17
b (For charging adjustment)
Set lever
d

3 - 3 Installing the range/viewfinder assembly (5 - 1)

1) After checking the linkage (5 - 37) to insure that it is not deformed or tilted, set the range scale to 1 m, and wind up the film advance lever.

2) Push to move the interlock rod (7 - 123) to the lens barrel side, apply the face of the linkage (5 - 37) to the interlock rod (7 - 123), fit the range/viewfinder assembly (5 - 1) to the chassis, and secure it with three screws (1 - 3).

3) Move the focusing ring, and make sure that the moving viewfinder frame (5 - 65) and moving frame assembly (5 - 12) operate smoothly.

3 - 4 Adjustment of focusing position

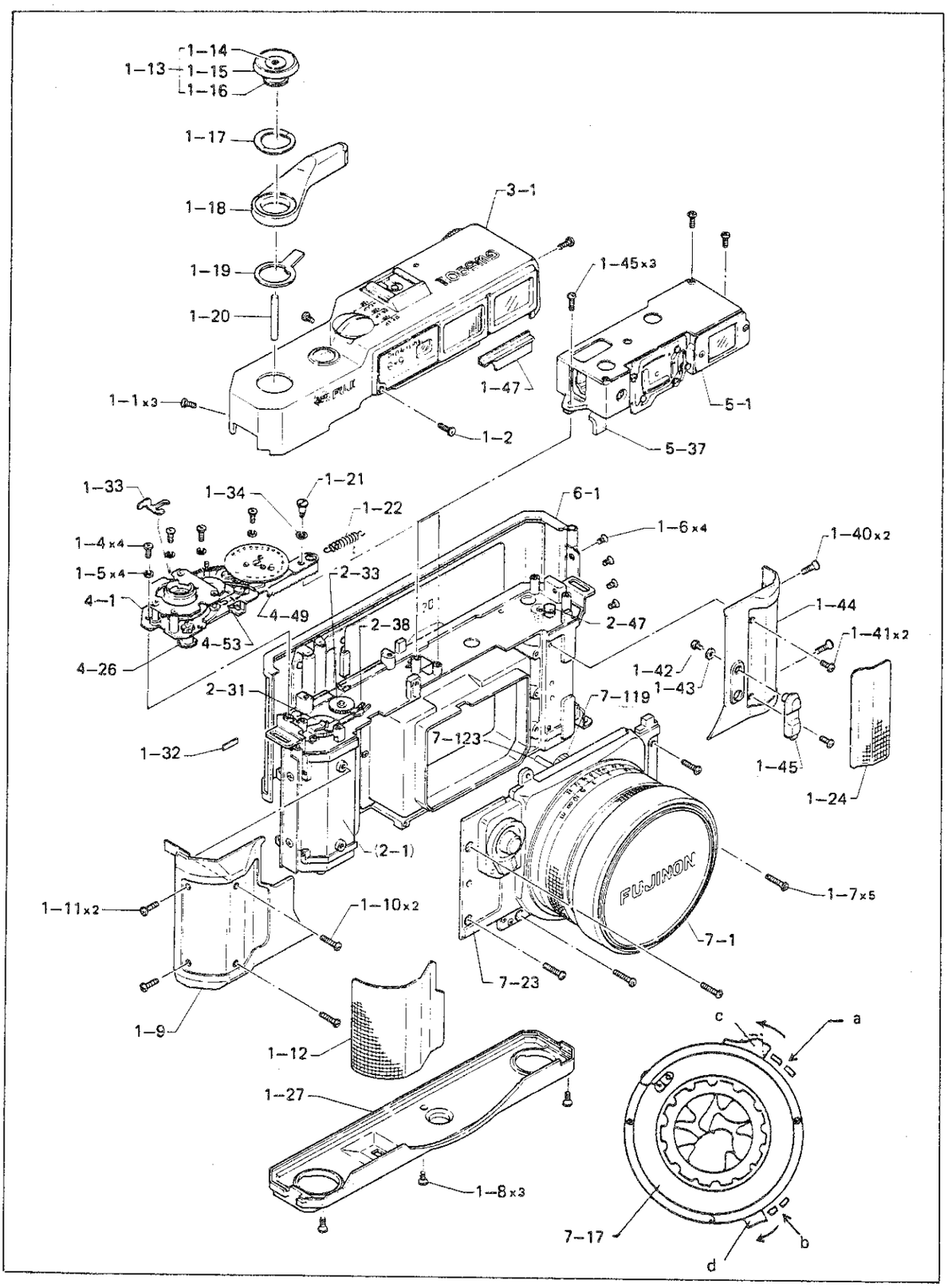
1) Set the shutter speed selector ring to "T", wind up the film advance lever, and thus, fully open the shutter
(Shutter : Bulb; Aperture : Fully opened).

2) Place the camera on a collimater, turn the focusing ring from the close - up distance to the infinity several times. When the focusing ring stops at the stopper in the infinite position, set the position at 0.03 mm toward the lens side from the rail plane, and assuming this position as zero, adjust the position within ±0.01. Now, tighten three set screws (7 - 65) evenly.

3) After adjusting the focusing position, turn the focusing ring from the middle range to the infinity several times, and make sure again that the focusing position is correct.
Rated focusing position: 0.03±0.01 toward the lens side from the rail plane

NOTE: Before performing the above adjustment, thoroughly clean the mirror (focusing position adjusting base) and rail plane of the camera.

Fig. 16


1–14
1–13
1–15
1–16
1–17
1–18
1–19
1–20
3–1
1–45×3
1–1×3
1–47
5–1
1–2
5–37
1–33
1–34
1–21
1–22
6–1
1–6×4
1–4×4
1–5×4
2–33
4–1
4–49
2–38
2–47
4–53
4–26
2–31
1–40×2
1–44
1–41×2
1–42
1–43
7–119
7–123
1–32
1–45
1–24
(2–1)
1–11×2
1–10×2
FUJINON
1–7×5
7–1
7–23
1–9
1–12
1–27
1–8×3
c
a
7–17
b
d

3 - 5 Adjustment of the range finder (At infinity and 1.2 m)

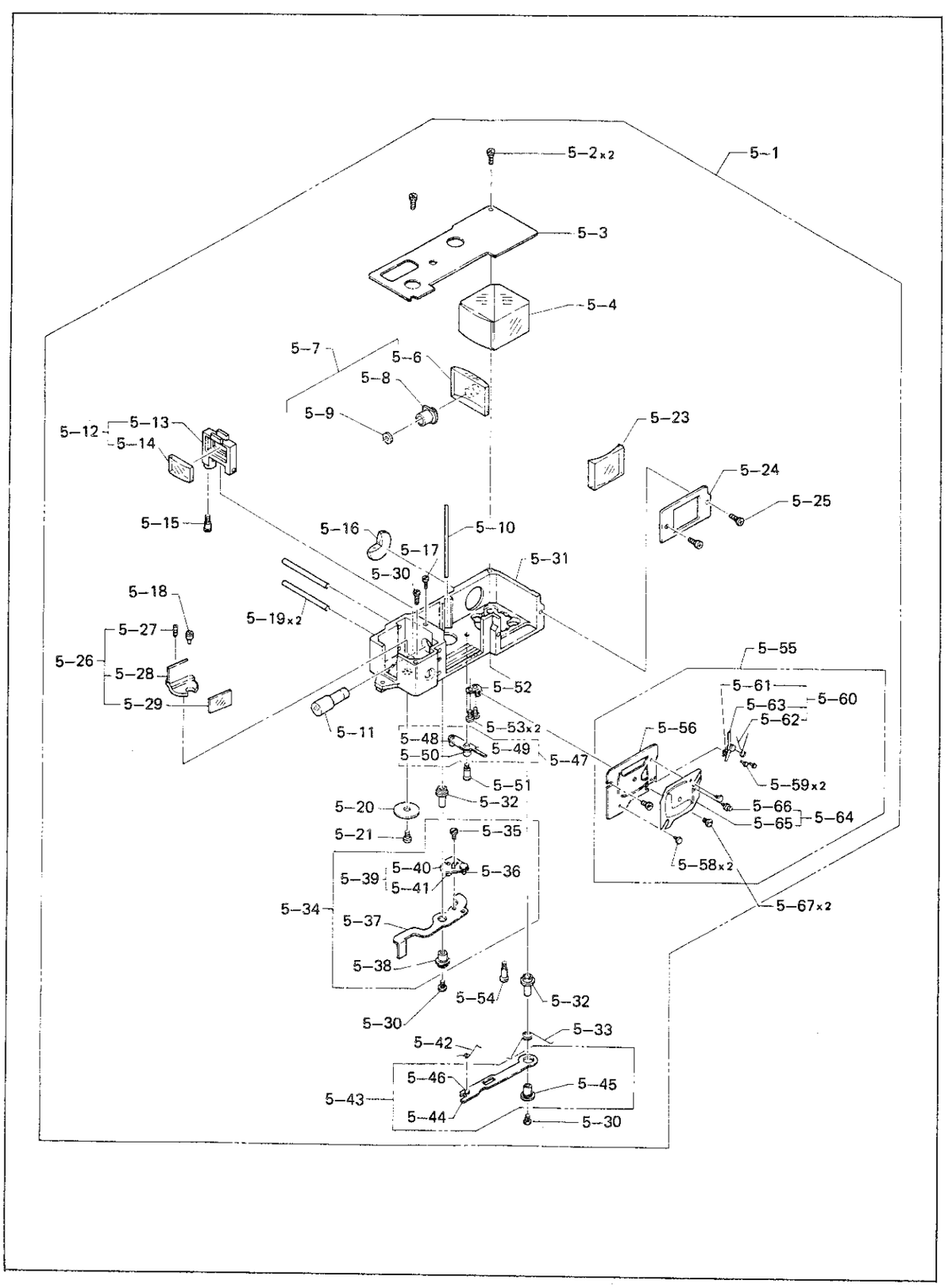
1) Fix the camera on a tripod, look at an image in infinite distance (500 meters or farther, or infinity of the collimater), and make adjustment by properly turning the eccentric pin (5 - 18) so that the moving image in the range finder matches with the stationary image.
Now, turn the focusing ring a few times from the middle range to the infinity, and make sure that the moving and stationary images are matched.

2) Set the shutter to bulb, fully open the aperture, and face the camera forward against a chart located in the position 1.2 m from the rail plane of the camera, (In this case, the rail plane must be in parallel to the chart plane. Further, apply a sheet of frosted glass on the rail plane and match the chart center with the lens center.)
Next, set the focusing ring to 1.2 m, and make sure that the image is focused correctly.

3) Looking into the range finder, loosen the screw (5 - 35) slightly, move the adjust lever (5 - 39) by pushing it forward and backward with a screw driver or other proper tool, and thus, match the images in the range finder.
Retighten the screw (5 - 35) securely without fail.

4) Now, make sure that images in the range finder agree at both the infinity and 1.2 m, and that the focusing position is 0±0.05 from the rail plane at the 1.2 m distance. It is very rare to success in making this adjustment at one time. Perform repeatedly.
Further, the focusing position at 1.2 m may not necessarily agree with the index position of the focusing ring completely. In this case, the agreement between the focusing position and range finder should be prefered.

Fig. 17


5-2x2
5-1
5-3
5-4
5-7
5-6
5-8
5-9
5-12
5-13
5-14
5-15
5-23
5-24
5-25
5-16
5-17
5-30
5-10
5-31
5-18
5-19x2
5-27
5-26
5-28
5-29
5-11
5-52
5-53x2
5-48
5-50
5-49
5-47
5-51
5-32
5-20
5-21
5-35
5-39
5-40
5-41
5-36
5-34
5-37
5-38
5-54
5-32
5-30
5-33
5-42
5-46
5-45
5-43
5-44
5-30
5-55
5-61
5-63
5-60
5-62
5-56
5-59x2
5-66
5-65
5-64
5-58x2
5-67x2

3 - 6 Adjustment of parallax

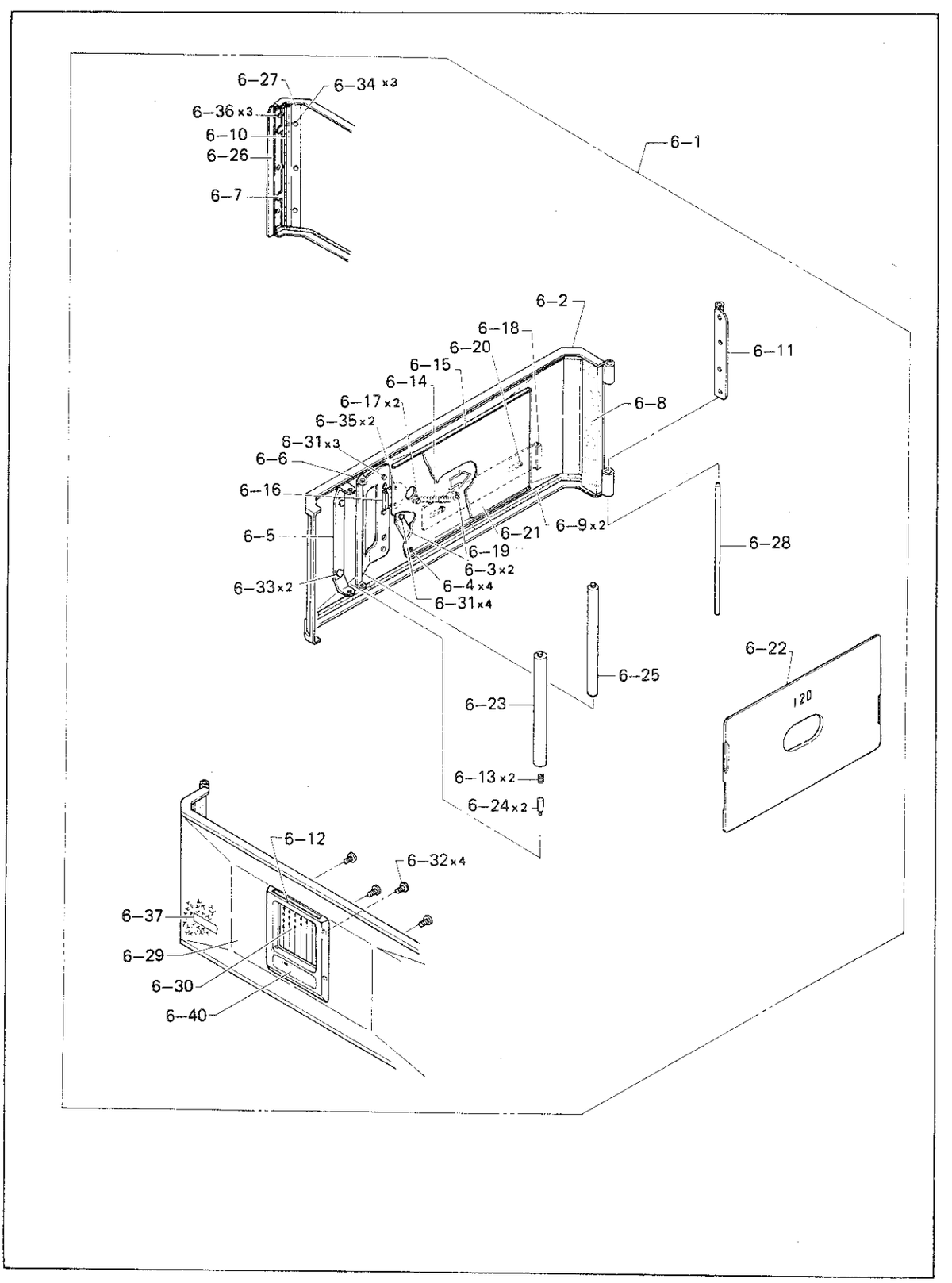
1) After adjusting the range finder, check the left, right, top and bottom positions of the picture projected on the focused plane, and then, look into the viewfinder to insure that the image seen in the viewfinder frame agrees with the checked positions. When adjustment is required, loosen two screws (5 - 67) and change position of the viewfinder frame adequately. Or, it may be adjusted by slightly bending the interlock lever (5 - 63). The deviation between the viewfinder frame and actual picture should be within the width of the viewfinder frame line.

2) After adjusting the viewfinder frame, make sure that the viewfinder frame operates smoothly and that the viewfinder frame is not tilted.
Then, finally, check the range finder for the infinite position, and make sure that the left, right, top and bottom position are not deviated.
If deviated, adjust it with the eccentric pin (5 - 18) [For left or right] and adjust screw (5 - 27) [For top and bottom], and then, install the cover (5 - 3) with two screws (5 - 2).

3 - 7 Installing the camera back assembly (6 - 1)

Make sure that the pressure plate (6 - 22) and rollers (6 - 23 and 6 - 25) are installed correctly and they operate normally, and then, install the camera back assembly (6 - 1) with four screws (1 - 6).
After installing the camera back assembly, open and close it two to three times and make sure that the camera back can be opened and closed smoothly and that the camera back is locked and unlocked correctly.

Fig. 18


6–27
6–34 ×3
6–36 ×3
6–10
6–26
6–7
6–1
6–2
6–18
6–20
6–15
6–14
6–17 ×2
6–35 ×2
6–31 ×3
6–6
6–16
6–5
6–33 ×2
6–21
6–19
6–3 ×2
6–4 ×4
6–31 ×4
6–9 ×2
6–8
6–11
6–28
6–25
6–23
6–13 ×2
6–24 ×2
6–22
120
6–12
6–32 ×4
6–37
6–29
6–30
6–40

3 - 8 Installing the top cover assembly (4 - 1) and adjusting the exposure counter

1) Install the top cover assembly (4 - 1) temporarily, load the camera with a film, set the film selector (3 - 3) to "4EXP", wind up the film advance lever, and make sure that the exposure counter indicates "1".
Now, depress the shutter release, and make sure that the shutter is released and the exposure counter advances accordingly. Further, make sure that the exposure counter no longer advances when the exposure counter indicates "4".

2) Next, reload the camera with a film, advance the film, and make sure that:

A) The shutter cannot be released when the exposure counter is in between "S" and "1".

B) The shutter cannot be released when the exposure counter is in between "1" and "2", "2" and "3", and "3" and "4".
[The shutter can be released only when the exposure counter indicates a certain number after advancing the film one frame completely.]

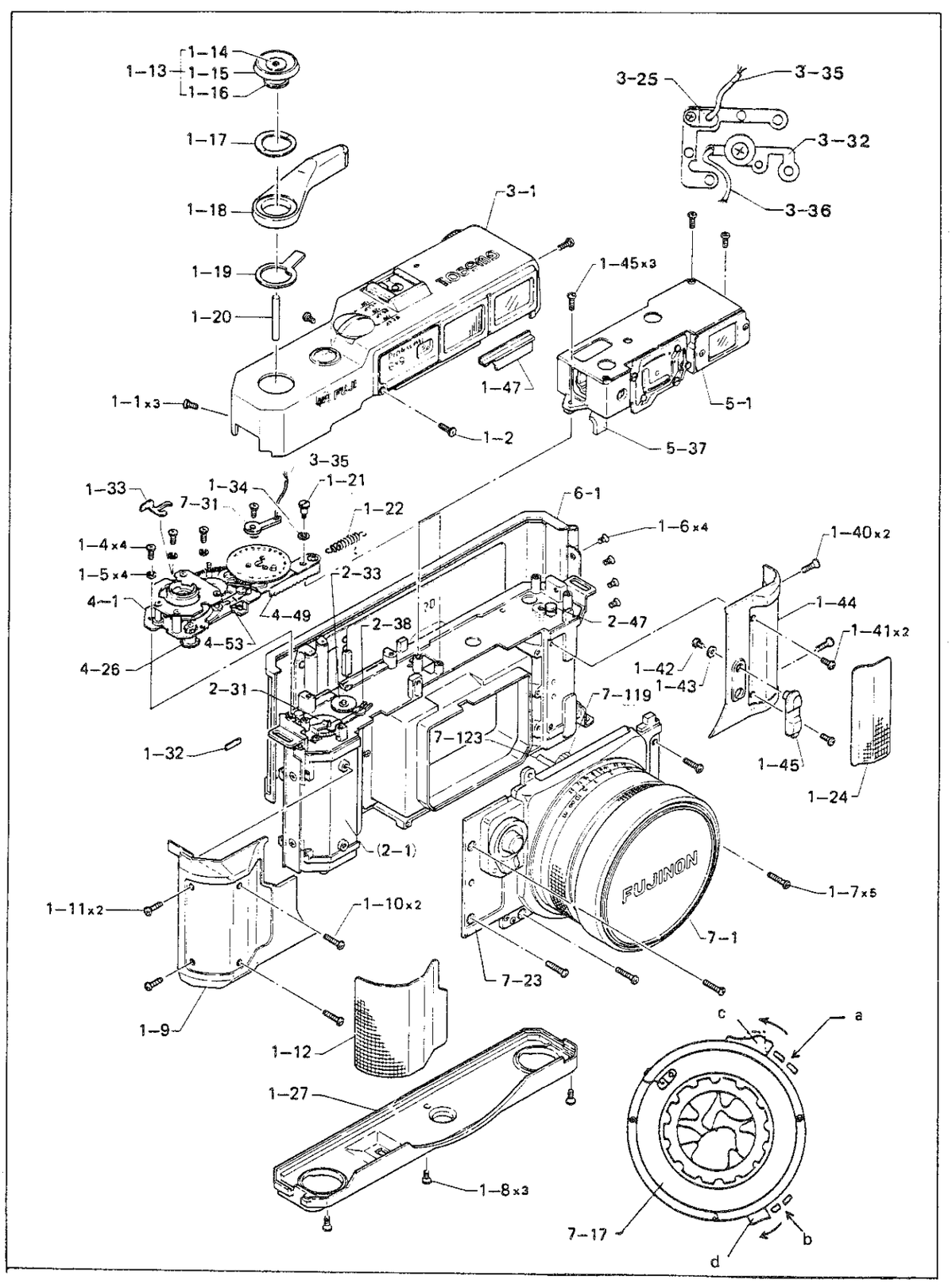
Make the above check with the film selector set to "8EXP" and "16EXP" also.

3) Remove the top cover assembly, remove one screw (1 - 4), and reinstall the screw after applying the lug (7 - 40).
Connect the red lead wire (3 - 35) to the contact (3 - 25) by the use of a soldering iron.
Next, connect the black lead wire (3 - 36) to the contact (3 - 32) by the use of a soldering iron.

4) Thoroughly clean the lens of the range finder, viewfinder frame and other windows on the top cover, blow out dust from the inside, place the rib (1 - 47) on the chassis, and install the top cover assembly (4 - 1) on the chassis with three screws (1 - 1).

5) Place the shutter release shaft (1 - 20), stopper (1 - 19), film advance lever (1 - 18) and spring washer (1 - 17) in their positions, and secure them with the top shutter release assembly (1 - 13).
When tightening the top shutter release assembly (1 - 13), recommend a piece of thin rubber sheet be used.

Fig. 19


1-14
1-13
1-15
1-16
1-17
1-18
1-19
1-20
1-1x3
1-2
3-1
1-47
1-45x3
5-1
5-37
3-25
3-35
3-32
3-36
3-35
1-21
1-34
1-33
7-31
1-22
6-1
1-6x4
1-4x4
1-5x4
2-33
4-1
4-49
2-38
2-47
4-53
4-26
2-31
7-119
1-42
1-43
1-40x2
1-44
1-41x2
1-45
1-24
7-123
1-32
(2-1)
1-11x2
1-10x2
1-7x5
7-1
7-23
1-9
1-12
1-27
1-8x3
7-17
a
b
c
d

3 - 9 Installing the exterior parts

1) Install the bottom cover (1 - 27) on the chassis with three screws (1 - 8) completely. Floating is not allowed.

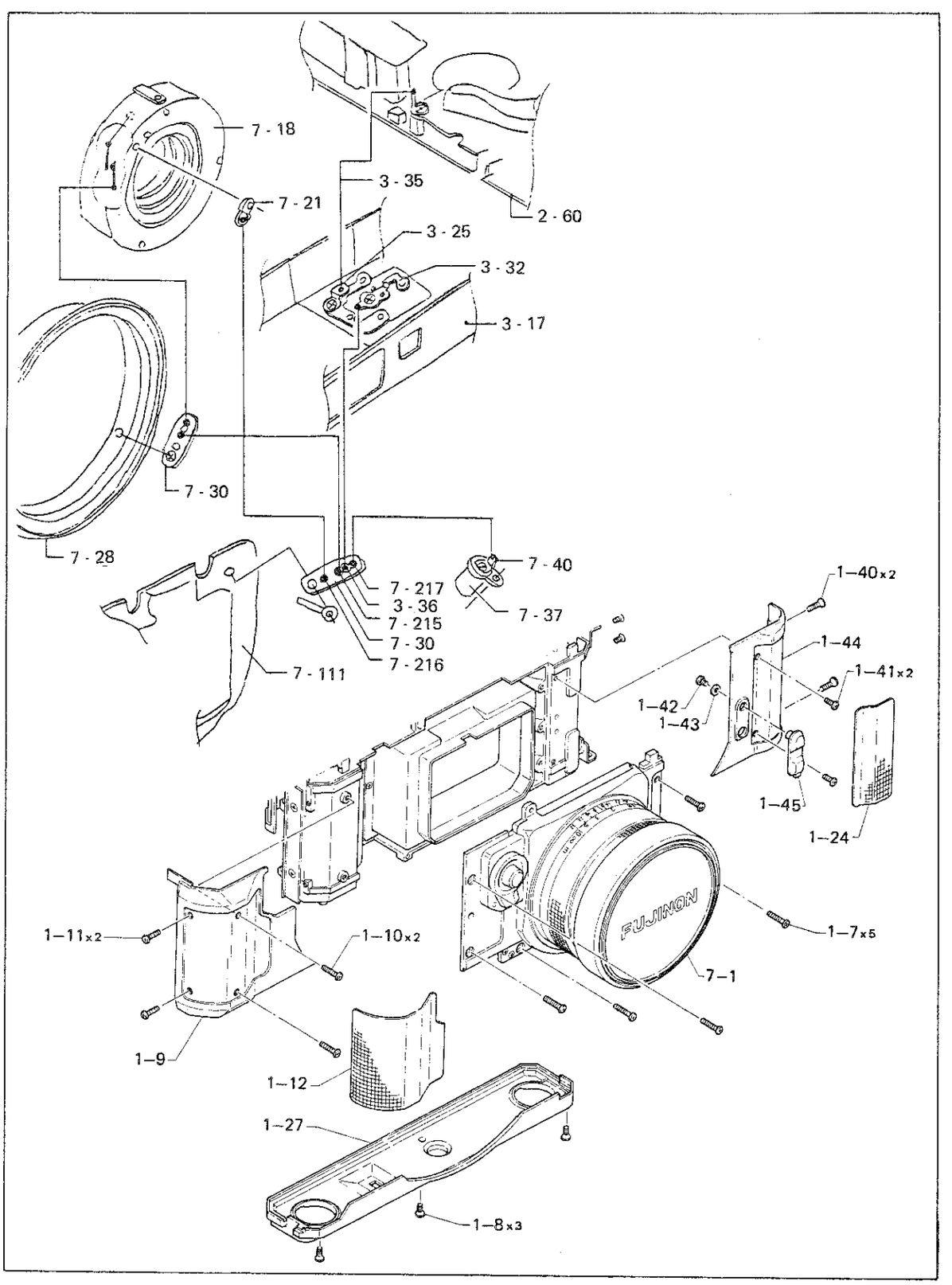
2) Install the grip (1 - 9) on the chassis with two screws (1 - 10) and two screws (1 - 11). Floating or tilting is not allowed.

3) With the synchro - terminal fitted into the hole completely, install the cover (1 - 44) on the chassis with two set screws (1 - 40) and two screws (1 - 41). Floating is not allowed.

4) Install the leathers (1 - 12 and 1 - 24) on the grip (1 - 9) and cover (1 - 27) with adhesive. (Apply ketone to the adhered surface of the leather to melt the adhesive.)

5) Apply the knurled ring (7 - 66) to the focusing ring I (7 - 63), apply adhesive in between the knurled ring and focusing ring I at two to three positions to secure the knurled ring on the focusing ring I.

Fig. 20


7 - 18
7 - 21
3 - 35
2 - 60
3 - 25
3 - 32
3 - 17
7 - 30
7 - 28
7 - 40
7 - 37
7 - 217
3 - 36
7 - 215
7 - 30
7 - 216
7 - 111
1–40x2
1–44
1–41x2
1–42
1–43
1–45
1–24
1–11x2
1–10x2
1–7x5
7–1
1–9
1–12
1–27
1–8x3

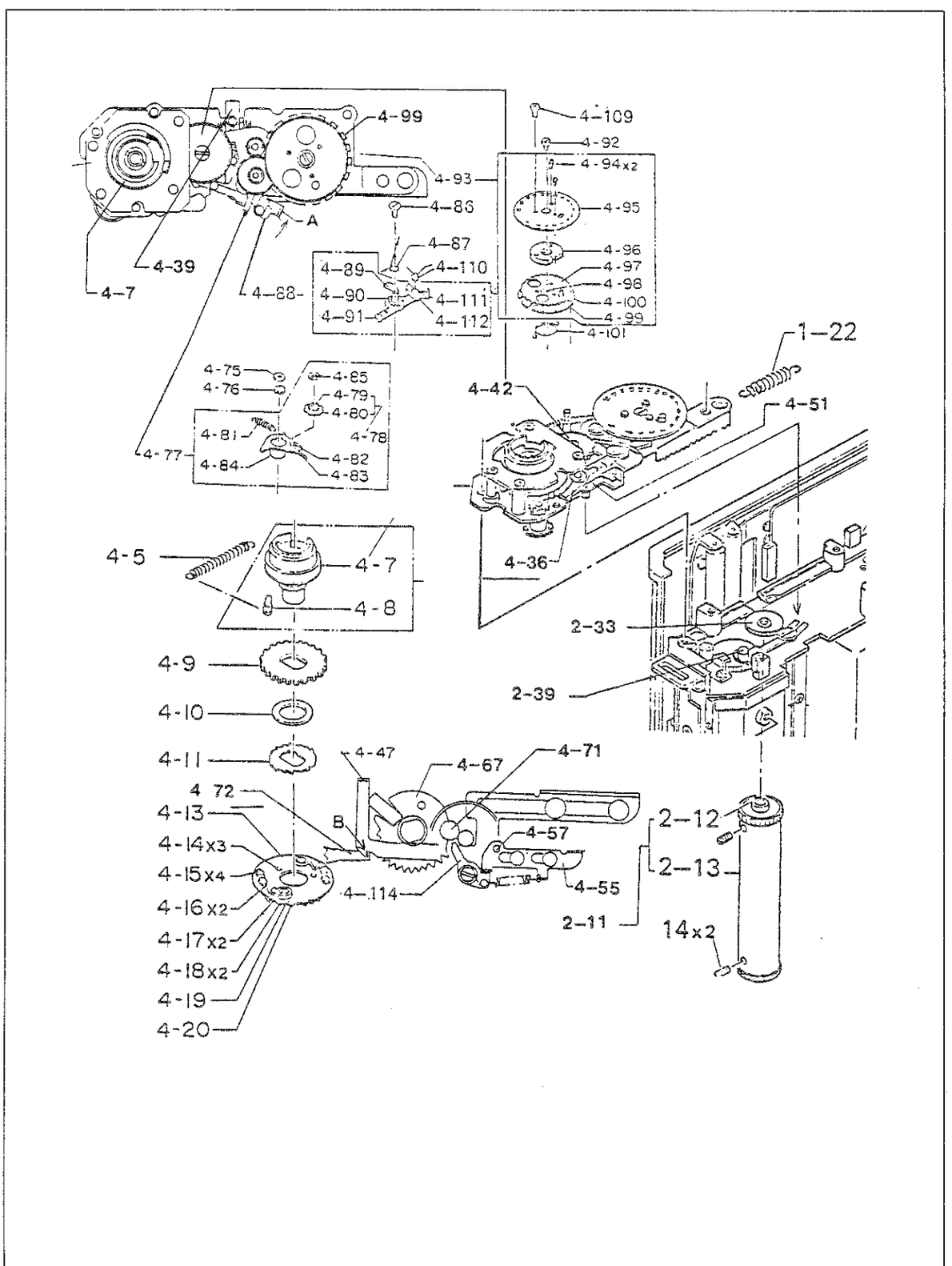
IV DESCRIPTIONS FOR FILM ADVANCING/SHUTTER CHARGING AND RELEASING MECHANISM

1. When the camera is loaded with a film and camera back is closed, the return lever (4 - 39) is pushed by the back cover, causing the rotary plate assembly (4 - 77) to turn. Then, the gear (4 - 79) engages with the gear assembly (4 - 78).
   At this time, the head A of the lever assembly (4 - 88) is slightly separated from the disc (4 - 99). Therefore, the pawl (4 - 36) disengages with the pawl wheel (4 - 20) allowing the film advance lever to be wound up.
   At the same time, the lock lever assembly (4 - 51) and lock lever assembly (2 - 37) turn, causing the lock pin (2 - 39) to enter the space under the release lever (7 - 99), prohibiting the shutter releasing.

   NOTE: When these two lock levers (4 - 51 and 2 - 37) do not operate correctly (due to unhooked spring, existence of dust, etc.), the shutter is not locked, allowing the shutter to be released before the film is taken up one frame completely.

2. When the film advance lever is wound up, the gear (4 - 9) which turns simultaneously with the sleeve assembly (4 - 6) causes the disc assembly (4 - 12) to turn through the pawl (4 - 18), and the energy is transfered to the gear (4 - 22) and gear assembly (4 - 32) causing the film to be advanced.
   At the same time, as the gear (4 - 42) turns, the rack assembly (4 - 47) is pulled up by the shaft (4 - 71) of the ratchet wheel assembly (4 - 67) at the first wind up, the gear (7 - 119) is turned by the teeth of the rack, and with the gear of set plate (7 - 42), the shutter is charged through the gear (7 - 54). [Arrow A in Fig. 22]
   Then, the hook B of the rack assembly (4 - 47) hooks on the hook (4 - 72), and its head enters the space beneath the release lever.
   At the same time, the lever assembly (4 - 114) which has been hooked on the ratchet is kicked by the last projection of the ratchet, the lever assembly (4 - 55) enters the hook, the pawl disengages with the ratchet, the interlock pin (4 - 57) moves away from the lever assembly (4 - 88), the head A of the lever assembly (4 - 88) rides on the disc (4 - 99), the head A of the lever assembly (4 - 88) further drops into the recess, and thus, the shutter is allowed to be released.

Fig. 21

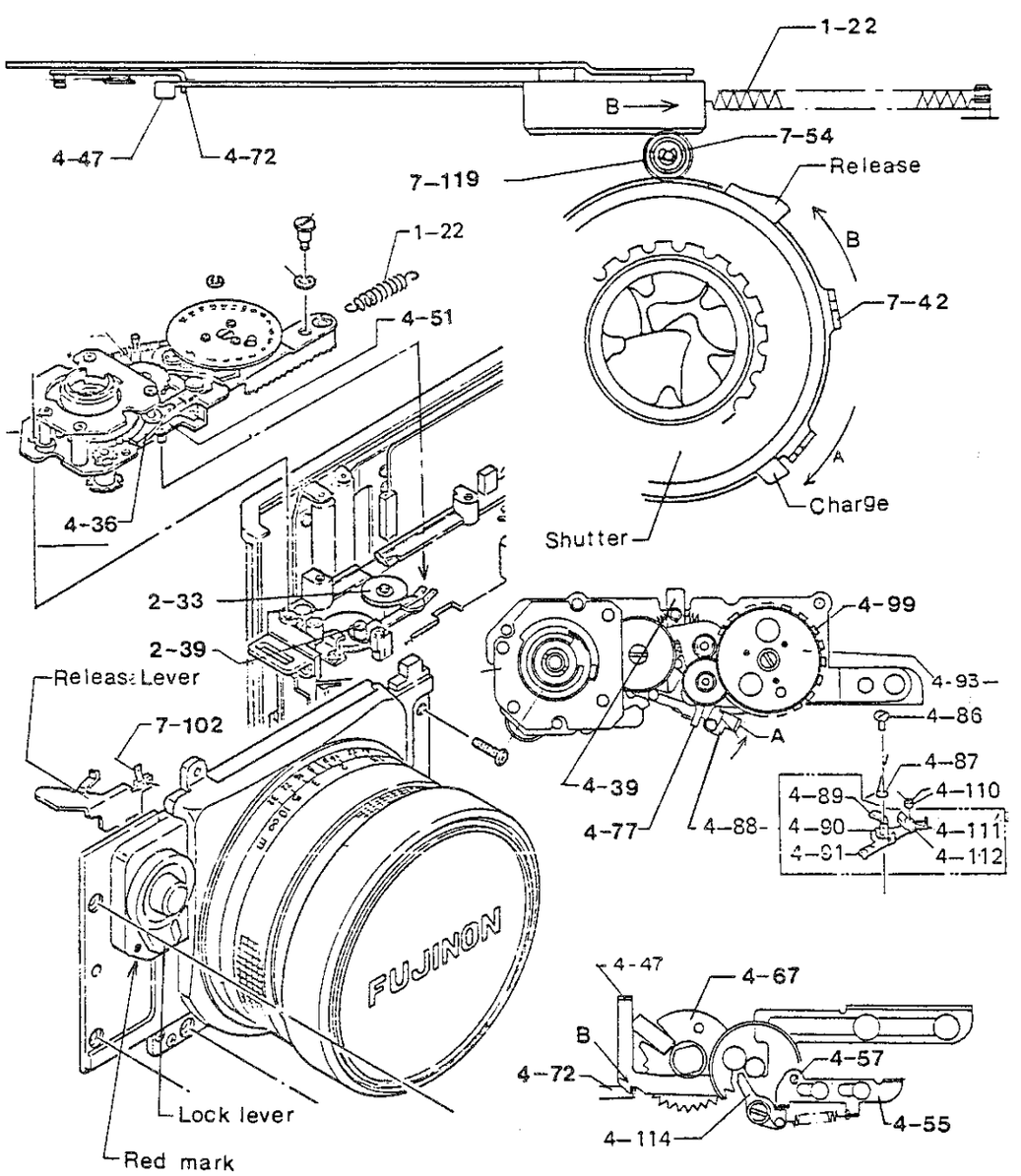

4-99
4-109
4-92
4-94x2
4-93
4-95
4-86
A
4-87
4-89
4-110
4-96
4-97
4-39
4-90
4-98
4-7
4-88
4-111
4-100
4-91
4-112
4-99
4-101
1-22
4-75
4-85
4-76
4-79
4-42
4-51
4-80
4-81
4-78
4-77
4-84
4-82
4-83
4-5
4-7
4-36
4-8
2-33
4-9
2-39
4-10
4-11
4-47
4-67
4-71
4-72
4-13
B
4-57
2-12
4-14x3
2-13
4-15x4
4-114
4-55
4-16x2
2-11
14x2
4-17x2
4-18x2
4-19
4-20

3. When the film is continued to be wound up, the exposure counter drum assembly (2 - 11) which is turned by friction of the film and take - up gear (2 - 31) turn, causing the gear assembly (4 - 60), gear (4 - 76) and gear (4 - 80) to turn.
Thus, the exposure counter advances from "S" to "1", the head A of the lever assembly (4 - 88) drops into the recess on the disc (4 - 99), the pawl (4 - 36) which is interlocked with the lever assembly engages with the pawl wheel (4 - 20), and thus, the winding up stops.
At the same time, the lock lever assembly (4 - 51) pushed by the head A of the lever assembly (4 - 88) causes the lock lever assembly (2 - 37) to turn.
Then, the lock pin (2 - 39) moves away from the release lever, allowing the shutter to be released.

4. When the shutter release is depressed with the front shutter release ring (7 - 86) so set that the red mark can be seen (unlocked), the release lever assembly (7 - 98) is pushed by the shutter release shaft (1 - 20), it further pushes the head of the rack (4 - 49) down, and thus, it is unhooked with the hook (4 - 72).
The rack (4 - 49) pulled by the spring (1 - 22) moves rapidly, and causing the gear (7 - 119) to turn, the rack kicks the lever assembly (4 - 55), unhooking the lever assembly (4 - 114). The rack further moves rapidly, turns the gear (7 - 54) causing the set plate (7 - 42) to turn, and thus, the shutter is released.
[Arrow B in Fig. 22]

5. As soon as the shutter is released, the lever (7 - 102) pushes the pawl (4 - 36), the pawl (4 - 36) moves away from the ratchet, and the head A of the lever assembly (4 - 88) is pulled out from the recess on the disc (4 - 99).
At the same time, the pin (4 - 57) on the lever assembly (4 - 55) kicked by the rack supports the lever assembly (4 - 88).
Further, the lock levers (4 - 51 and 2 - 37) turn toward the locking direction, and when the shutter release shaft returns as the shutter release is freed from the depression, the lock pin (2 - 39) enters the space beneath the release lever, and thus, the shutter release is locked.
The lever assembly (4 - 114) is released, hooked on the ratchet wheel (4 - 69), and thus, the lever assembly (4 - 114) functions to prevent reverse turn.

Fig. 22

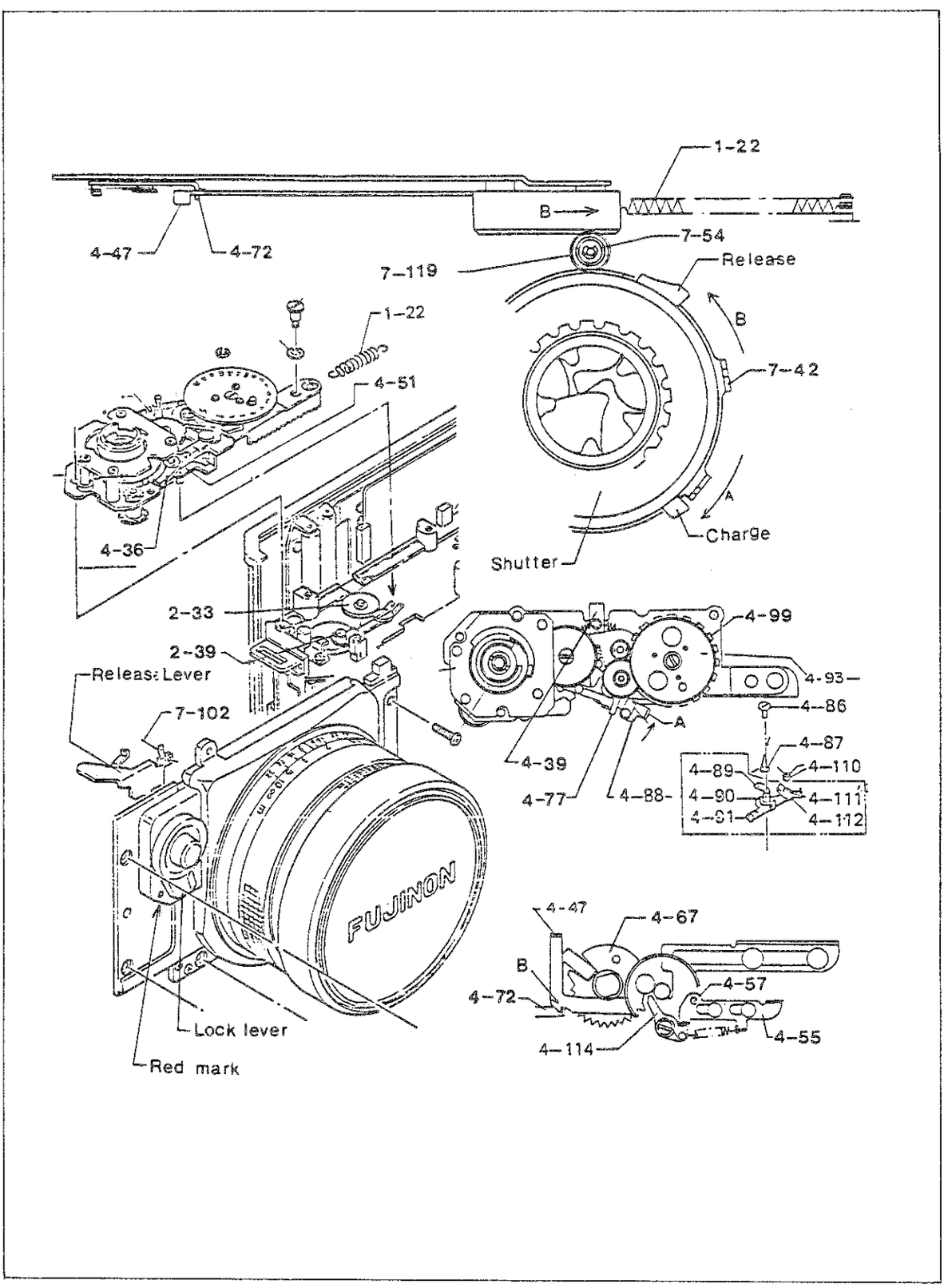

1-22
B
4-47
4-72
7-54
7-119
Release
1-22
B
4-51
7-42
4-36
A
Charge
Shutter
2-33
4-99
2-39
Release Lever
4-93
7-102
4-86
A
4-87
4-39
4-89
4-110
4-77
4-88
4-90
4-111
4-91
4-112
FUJINON
4-47
4-67
B
4-57
4-72
4-55
4-114
Lock lever
Red mark

6. The lever assembly (4 - 114) functions to prevent reverse turn of the shutter charging mechanism until the shutter is charged completely. Without this function, the shutter is not charged but the film is advanced when the film advance lever is wound up gradually, and as the exposure counter advances, the shutter is allowed to be released before it is charged completely in a middle between frames, or the shutter cannot be released and the film is not wound up.
   Note that the lever assembly (4 - 114) is important. If this lever assembly does not operate smoothly, the camera does not operate correctly.

7. When all frames are exposed and the film reaches the end, the exposure counter durm assembly (2 - 11) no longer turns. Then, the shutter is locked prohibiting the releasing.
   When the camera back is opened, the return lever (4 - 39) returns, the rotary plate assembly (4 - 77) turns, the counter gear (4 - 97) disengages with the gear assembly (4 - 78), the exposure counter returns to "S", and the camera returns to the condition before loading a film.

8. The series of operations from film loading to the end of photographing through film advancement, exposure counter advancement, shutter charging and shutter releasing were described above.
   When repairing, disassembling and reassembling the camera, the series of operations must be fully understood so that each function of the camera can be fully displayed.

Fig. 23


1-22
B
4-47
4-72
7-54
7-119
Release
B
1-22
4-51
7-42
4-36
A
Charge
Shutter
2-33
4-99
2-39
Release Lever
4-93
7-102
4-86
A
4-87
4-39
4-89
4-110
4-77
4-88
4-90
4-111
4-91
4-112
FUJINON
4-47
4-67
B
4-57
4-72
4-55
4-114
Lock lever
Red mark

V INSPECTION

1. Film advancing/Shutter charging/Exposure counter advancing/Shutter releasing

1 - 1 Film loading

With the shutter released, load a 220 film, close the camera back and make sure that :

1) The camera back is locked securely.

2) The exposure counter indicates "S".

1 - 2 Film advancing/Shutter charging

Wind up the film advance lever slowly, leave the film advance lever from the winding up in a half way before it is completely wound up, and make sure that the film advance lever does not return.
Continue to wind up the film advance lever, and make sure that the film advancing stops when the exposure counter advances from "S" to "1".

1 - 3 Shutter releasing

Set the shutter lock lever to the position where the red mark can be seen (shutter releasing is allowed), depress the top shutter release, and make sure that the shutter is released and shutter blades open and close correctly.

1 - 4 Film selector

Set the film selector to "4EXP", advance the film by checking as described in 1 - 2 and 1 - 3 above and make sure that the exposure counter stops at "4".
Next, set the film selector to "8", perform the same inspections, and make sure that both the film and exposure counter are advanced to the last frame.
Open the camera back, and make sure that the film is taken up correctly without slackness and that the exposure counter indicates "S".

2. Range/Viewfinder

2 - 1 Coincidence of images in the range finder

Watching an object in a long distance (A bar distanced 500 meters or longer from the camera) through the viewfinder, turn the focusing ring from the middle range to the infinity two to three times, and make sure that the double images in the viewfinder correctly match when the focusing ring is set to the infinity.

2 - 2 Range finder and viewfinder frame operations

Turn the focusing ring from the close - up distance to the infinity two to three times slowly, and make sure that the moving images of the viewfinder frame and range finder move smoothly without any dragging.
Further, amke sure that the helicoid operates smoothly and lightly.
Make sure that images can be seen clearly, no dust exists in the viewfinder and viewfinder lenses are clean.

3. Synchro - insulation and continuity

Apply a tester to the positive (+) and negative (—) terminals of the synchro - terminal and hot shoe, release the shutter, and make sure that the correct continuity exists. Further, make sure that no continuity exists when the shutter is not opened or closed.

4. Shutter release lock and shutter actuation counter

4 - 1 Set the shutter lock button to "L", and make sure that both the top and front shutter releases are locked and that the shutter cannot be released. Further, make sure that the lever operates smoothly and clicks at each position correctly.

4 - 2 Through the above inspections, make sure that number of shutter releasings is memorized and the actuation counter advances one number per 10 shutter releasings.

5. Other parts

5 - 1 Shutter speed selector ring

Check the shutter speed selector ring to insure that it turns smoothly and lightly, it clicks at each shutter speed, shutter speed changes as the indicated number changes, and that the shutter speed matches with the index.

5 - 2 Aperture selector ring

Check the aperture selector ring to insure that it turns smoothly, it clicks at each aperture value, the aperture diameter changes accordingly, and that the aperture number matches with the index.

5 - 3 Rollers

Check two rollers on the camera back and rollers on the rail plane to insure that they rotate smoothly. Further, check two rollers for the film holder to insure that they operate smoothly.

5 - 4 Pressure plate on the camera back

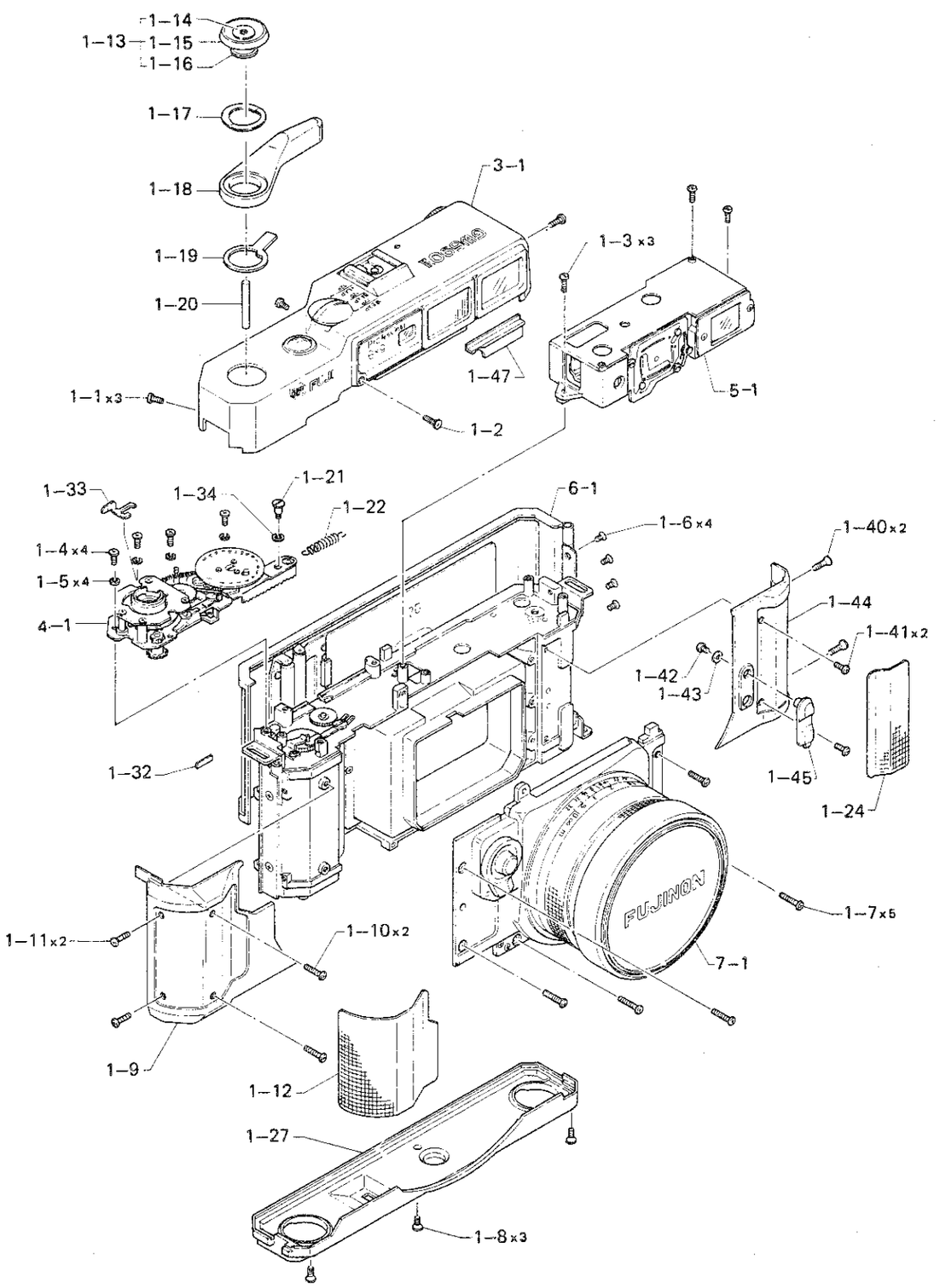
Push the pressure plate toward the arrow to remove it, and make sure that the pressure plate can be removed and installed without any problem.

5 - 5 Others

Make sure that the camera appearance is statisfactory. No remarkable scar, uncleanliness, peeled off character, etc. are not permitted.
Shake the camera to insure that no foreign matter exists inside the camera.
Finally, check the camera to insure that all the parts are installed correctly.

VI PARTS LIST GSW690II

Fig. 1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1–11 x2
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7–1
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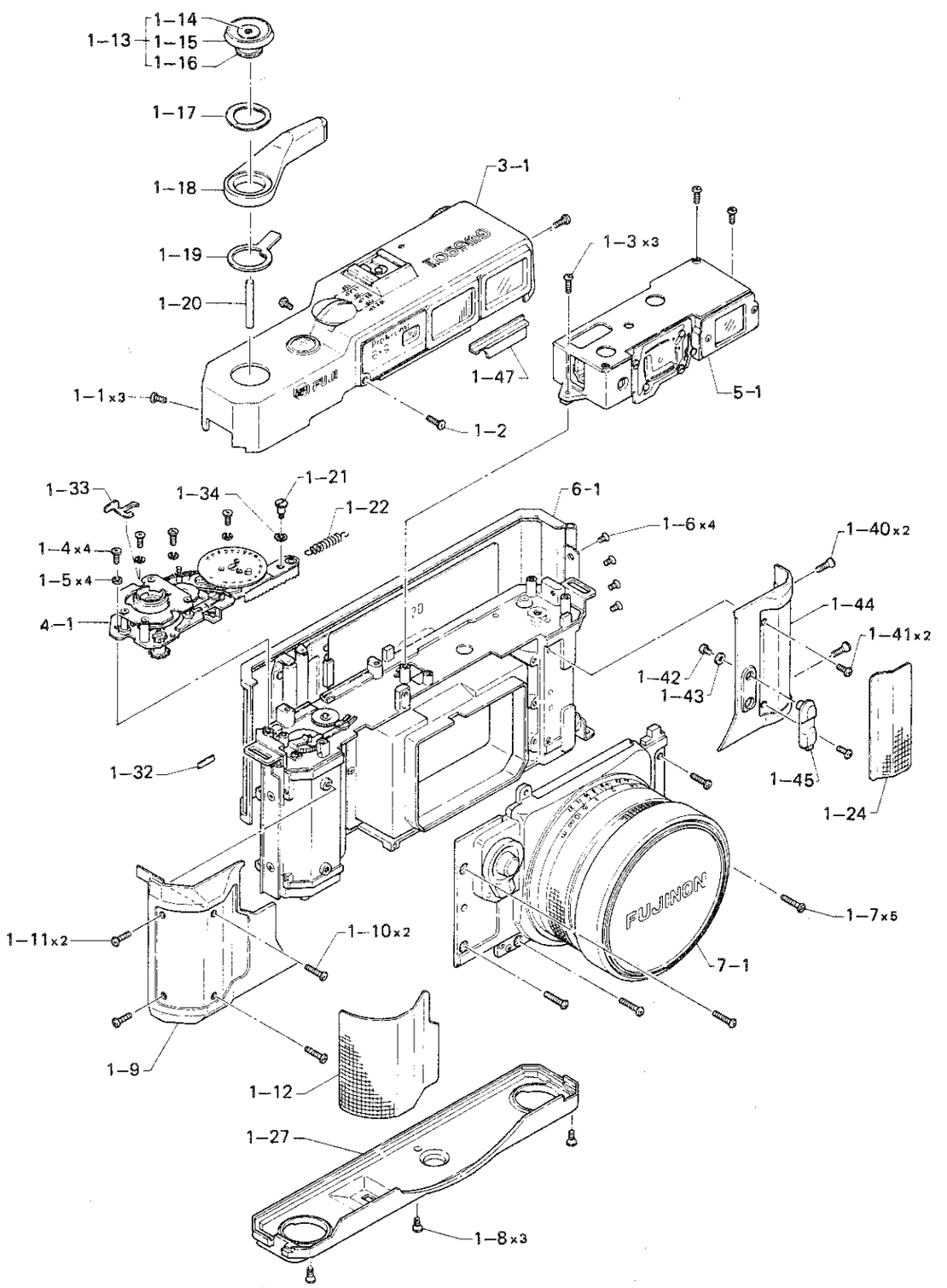
1–8 x3

REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (III)	GSW
1 - 1	53B494260	Screw	3	○	○	○
1 - 2	53B2189020	Screw	1	○	○	○
1 - 3	110M200603S	Screw	3	○	○	○
1 - 4	110M200503S	Screw	4	○	○	○
1 - 5	165M202H	Spring washer	4	○	○	○
1 - 6	111M170251S	Screw	4	○	○	○
1 - 7	110M260603S	Screw	5	○	○	○
1 - 8	53B2189030	Screw	3	○	○	○
1 - 9	41B4387790	Grip	1	○	×	○
1 - 10	110M200903S	Screw	2	○	○	○
1 - 11	110M200703S	Screw	2	○	○	○
1 - 12	59B4387770	Leather	1	○	×	○
1 - 13	84A2189500	Top shutter release assembly	1	○	○	○
1 - 14	16B2189090	Top shutter release	1	×	○	○
1 - 15	84B2189080	Holder	1	×	○	○
1 - 16	55B29680	Washer	1	×	○	○
1 - 17	50B29400	Spring washer	1	○	○	○
1 - 18	47B489640	Film advance lever	1	○	○	○
1 - 19	85B29390	Stopper	1	○	○	○
1 - 20	32B2189010	Shutter release shaft	1	○	○	○
1 - 21	53B2189060	Set screw	1	○	○	○
1 - 22	50B2191320	Spring	1	○	○	○
1 - 24	59B4387761	Leather	1	○	×	○
1 - 27	11B4387750	Bottom cover	1	○	×	○
1 - 32	58B29520	Number plate	1	○	○	○
1 - 33	50B2189100	Click spring	1	○	○	○
1 - 34	55B2189110	Washer	0 ~ 1	○	○	○
1 - 40	53B4387810	Set screw	2	○	×	○
1 - 41	110M170303S	Screw	2	○	×	○
1 - 42	110M200301S	Screw	1	○	×	○
1 - 43	55B4387830	Washer	1	○	×	○
1 - 44	11B4387800	Cover	1	○	×	○

Fig. 1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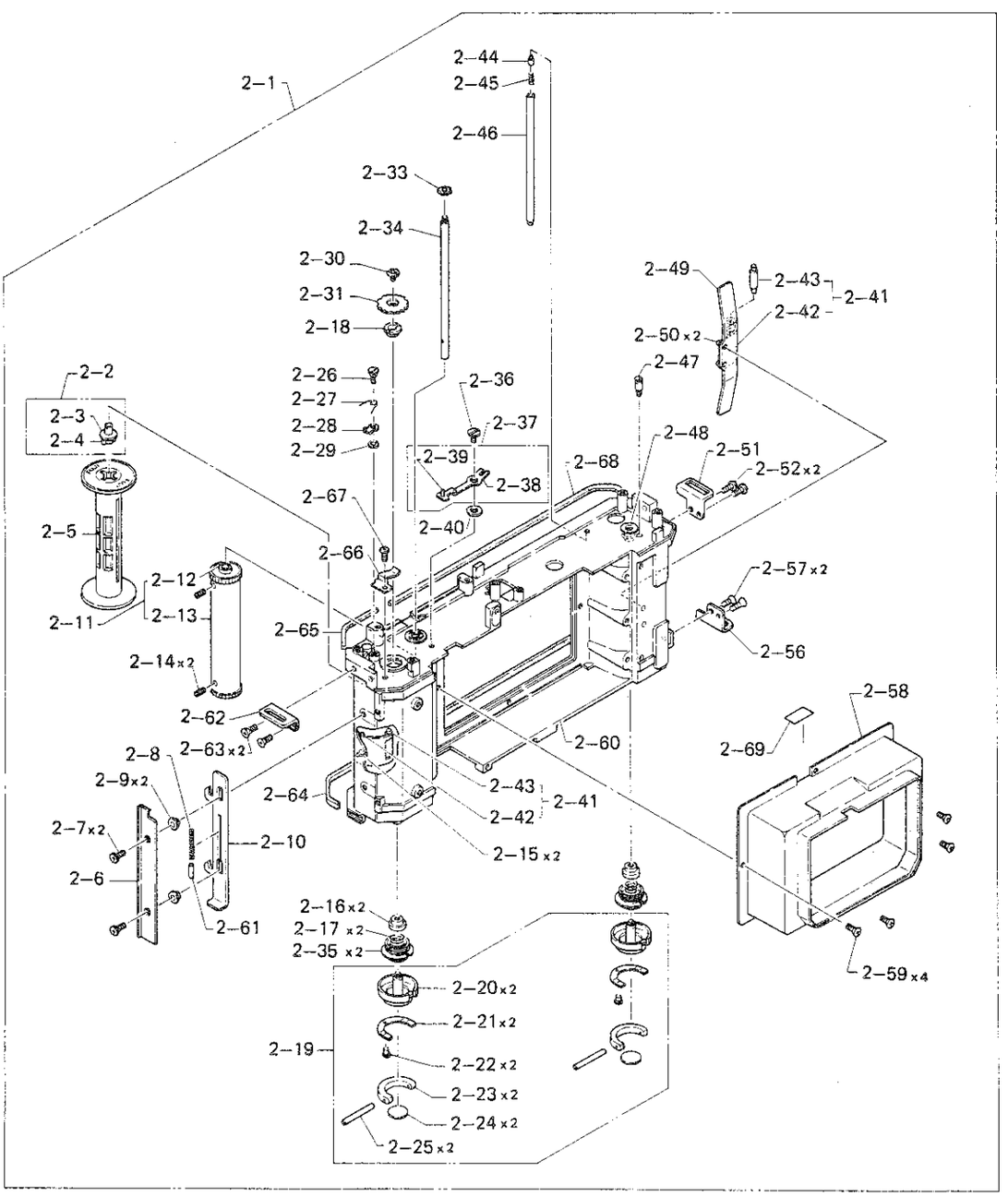
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
1 - 45	11B4387820	Synchro - cover	1	○	×	○
1 - 47	81B2192521	Rib	1	○	×	○

Fig. 2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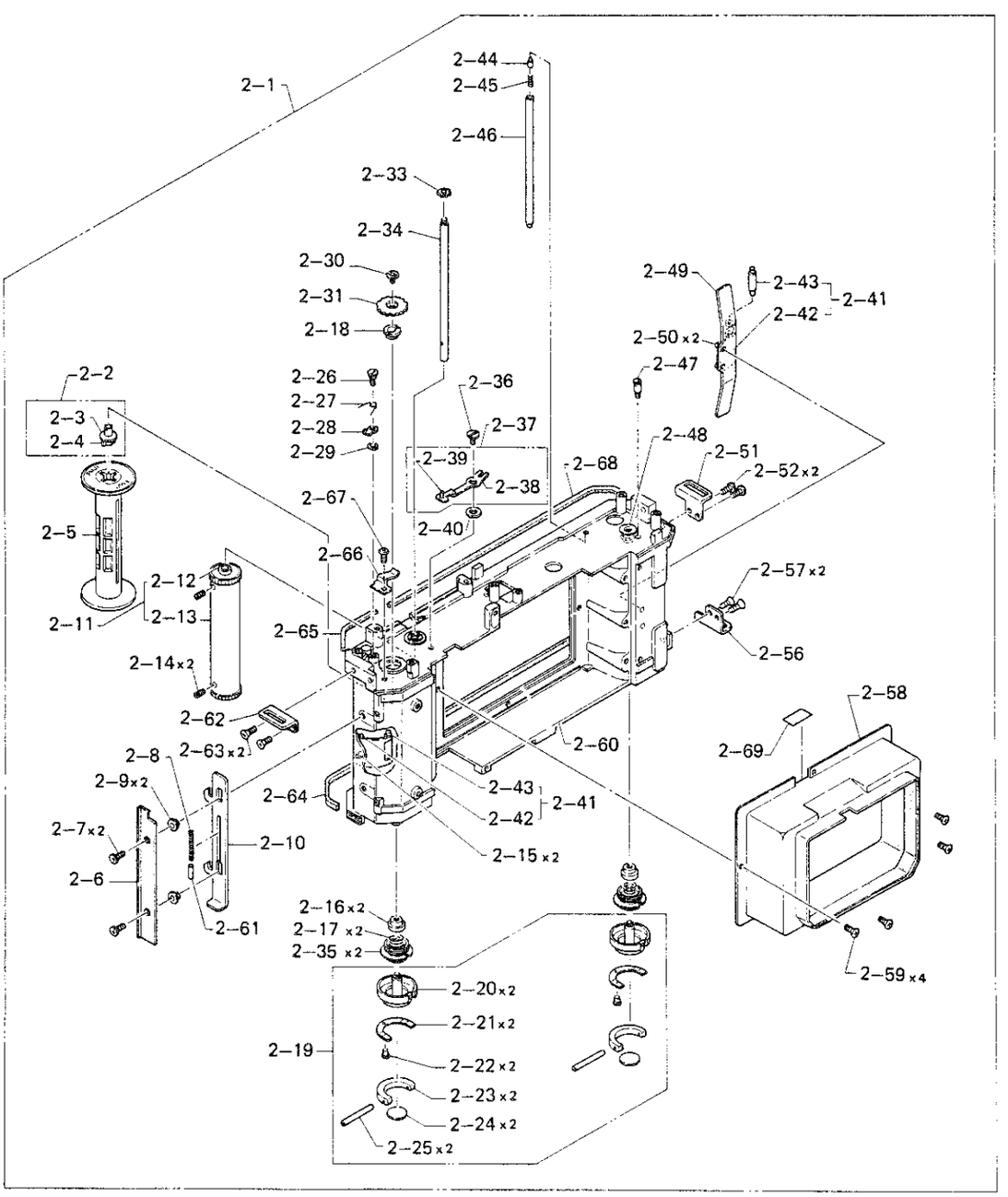
2-59 x4

REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
2 - 1	301A4388000	Chassis assembly	1	○	×	○
2 - 2	32A720040	Take - up shaft assembly	1	○	○	○
2 - 3	32B486845	Take - up shaft	1	×	×	○
2 - 4	85B30040	Take - up claw	1	×	○	○
2 - 5	37B29490	Spool	1	○	○	○
2 - 6	85B486990	Base plate	1	○	○	○
2 - 7	111M170451S	Screw	2	○	○	○
2 - 8	50B4388410	Spring	1	○	×	○
2 - 9	30B30950	Hook guide	2	○	○	○
2 - 10	45B4388350	Camera back hook	1	○	×	○
2 - 11	36A720060	Exposure counter drum assembly	1	○	○	○
2 - 12	36B486732	Collar	1	×	○	○
2 - 13	36B486724	Exposure counter drum	1	×	○	○
2 - 14	120M200503B	Set screw	1	○	○	○
2 - 15	170M15020C	Pin	2	×	○	○
2 - 16	32B2190060	Spool shaft holder	2	○		
2 - 17	50B30771	Spring	2	○	○	○
2 - 18	31B30700	Take - up shaft holder	2	○	○	○
2 - 19	29A2190940	Take - up spool knob assembly	2	○	○	○
2 - 20	29B2190040	Take - up spool knob	2	×	○	○
2 - 21	50B920720	Leaf spring	2	×	○	○
2 - 22	170M12014N	Pin	2	×	○	○
2 - 23	16B855790	Knob	2	○	○	○
2 - 24	17B2190050	Shaft	2	○	○	○
2 - 25	85B2190070	Cover	2	○	○	○
2 - 26	32B30750	Shaft	1	○	○	○
2 - 27	50B1070	Spring	1	○	○	○
2 - 28	45B1060	Hook	1	○	○	○
2 - 29		Washer	1	○	○	
2 - 30	53B30721	Screw	1	○	○	○
2 - 31	34B2190101	Take - up gear	1	○	○	○
2 - 33	34B2190090	Exposure counter drive wheel	1	○	○	○

Fig. 2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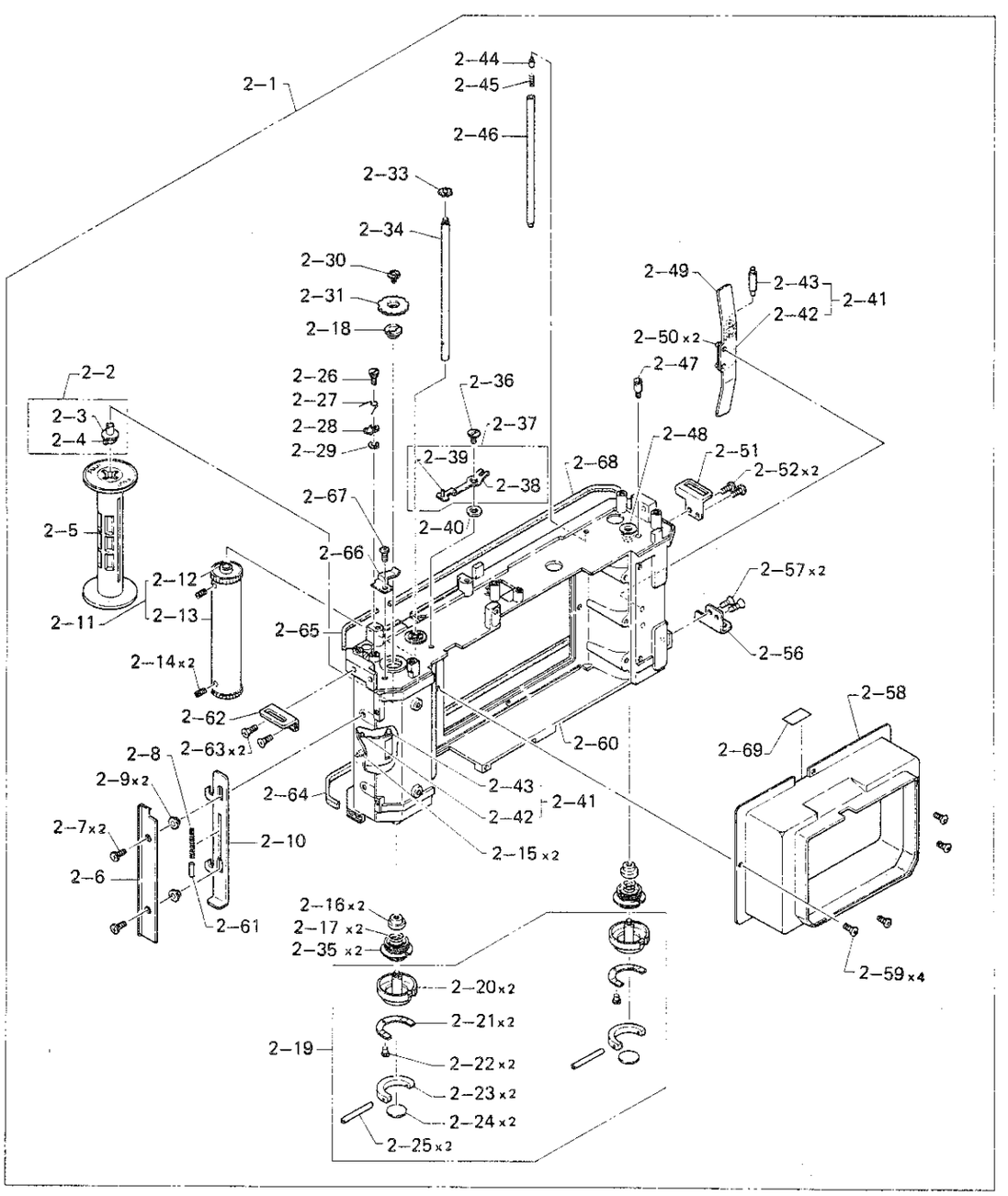
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
2 - 34	32B486752	Exposure counter drum shaft	1	○	○	○
2 - 35	23B2190030	Guide ring	2	○	○	○
2 - 36	53B2190150	Screw	1	○	○	○
2 - 37	47A2190950	Lock lever assembly	1	○	○	○
2 - 38	47B2190121	Lock lever	1	×	○	○
2 - 39	17B2190130	Lock pin	1	×	○	○
2 - 40	55B2190140	Washer	1	○	○	○
2 - 41	50A720000	Roller assembly	2	×	○	○
2 - 42	50B486970	Spring	2	×	○	○
2 - 43	37B486980	Roller	2	×	○	○
2 - 44	17B30160	Pin	1	○	○	○
2 - 45	50B30170	Spring	1	○	○	○
2 - 46	30B30150	Guide roller	1	○	○	○
2 - 47	52B2190110	Screw	1	○	○	○
2 - 48	31B486830	Film feed spool shaft	1	○	○	○
2 - 49	50B486960	Pressure spring	1	×	○	○
2 - 50	170M150250	Pin	2	×	○	○
2 - 51	41B4388360	Bracket	1	○	×	○
2 - 52	111M200403S	Screw	2	○	×	○
2 - 56	41B4388400	Bracket	1	○	×	○
2 - 57	111M200403S	Screw	2	○	×	○
2 - 58	27B2190010	Hood	1	○	○	○
2 - 59	110M170353S	Screw	4	○	○	○
2 - 60	10B4388200	Chassis	1	×	×	○
2 - 61	32B4388420	Guide shaft	1	○	×	○
2 - 62	41B4388390	Bracket	1	○	×	○
2 - 63	111M200403S	Screw	2	○	×	○
2 - 64	27B31790	Moquette	1	○	○	○
2 - 65	27B3771300	Moquette	1	○	○	○
2 - 66	50B2190211	Friction spring	1	○	×	○
2 - 67	110M200203S	Screw	1	○	×	○
2 - 68	27B3771310	Moquette	1	○	○	○

Fig. 2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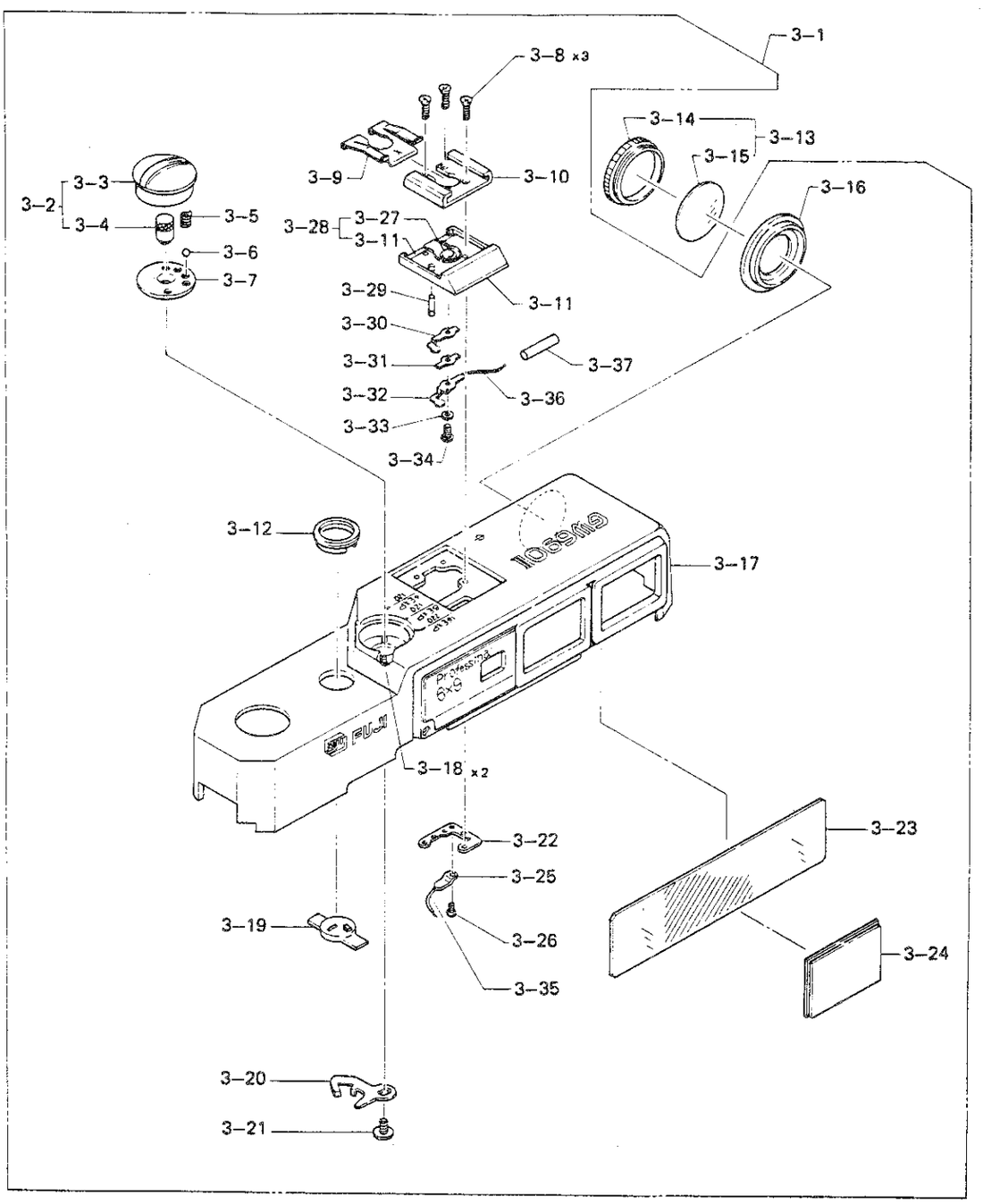
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (III)	GSW
2 - 69	27B2190230	Seal	1	○	○	○

Fig. 3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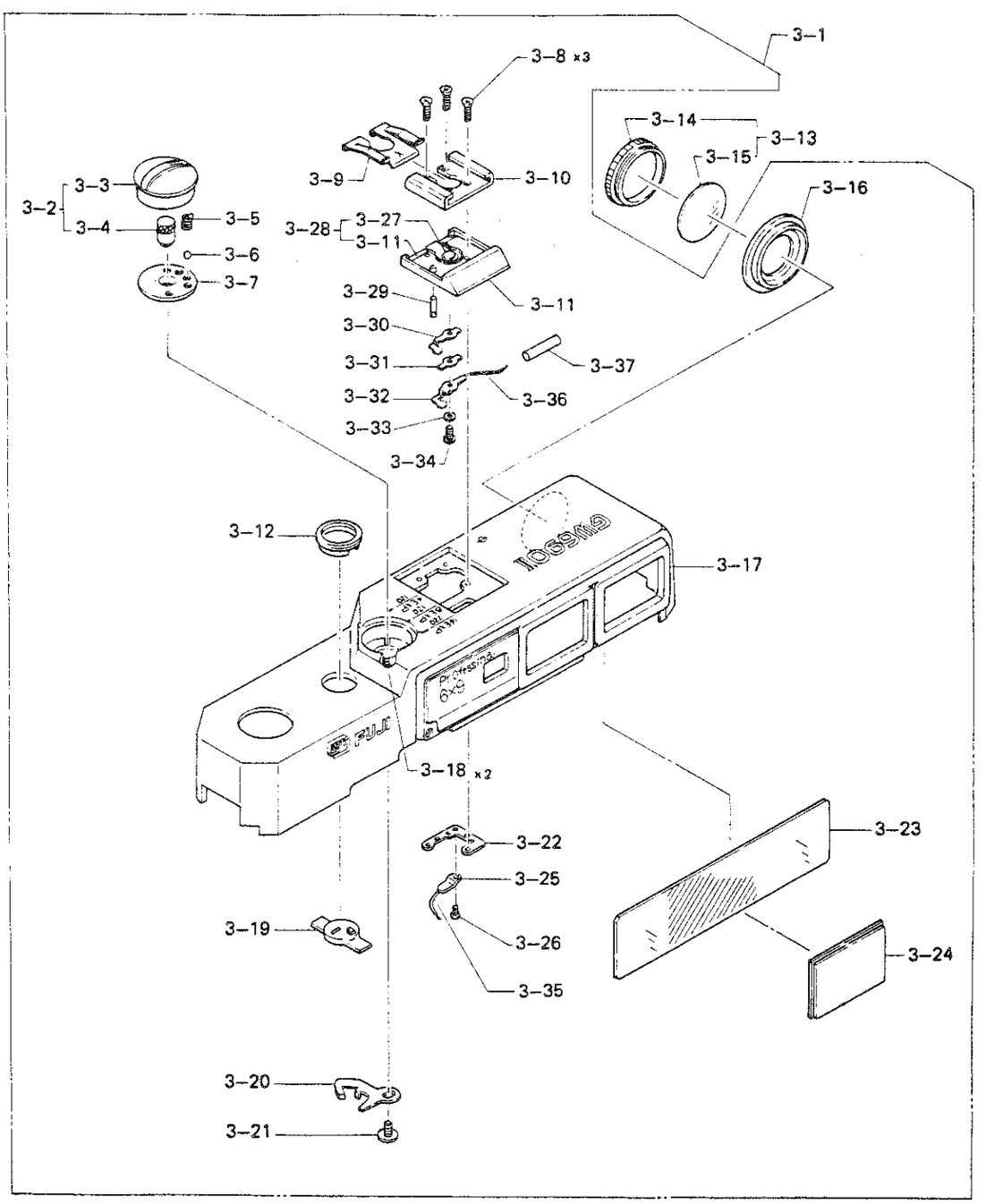
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
3 - 1	303A4392250	Top cover assembly	1	○	×	×
3 - 2	16A4389140	Film selector assembly	1	○	○	○
3 - 3	16B4389150	Film selector	1	×	×	○
3 - 4	32B2192530	Shaft	1	×	○	○
3 - 5	50B2192680	Spring	1	○	○	○
3 - 6	200M20	Steel ball	1	○	○	○
3 - 7	29B2192550	Base plate	1	×	○	○
3 - 8	111M170451N	Screw	3	○	×	○
3 - 9	11B3288380	Shoe cover	1	○	×	○
3 - 10	41B2252410	Accessory shoe	1	○	×	○
3 - 11	41B4389120	Seat plate	1	×	×	○
3 - 12	84B2192650	Exposure counter window	1	×	○	○
3 - 13	23A102900	Viewfinder eyepiece assembly	1	○	○	○
3 - 14	23B95570	Eyecup support ring	1	×	○	○
3 - 15	23B95580	Lens	1	×	○	○
3 - 16	23B2192580	Eyepiece	1	×	○	○
3 - 17	11B4392300	Top cover	1	×	×	×
3 - 18	17B2192570	Rivet	1	×	○	○
3 - 19	6B2192640	Exposure counter window	1	×	○	○
3 - 20	47B2192560	Limit lever	1	○	○	○
3 - 21	53B2191310	Screw	1	○	○	○
3 - 22	85B3286210	Seat plate	1	○	×	○
3 - 23	6B2192590	Window glass	1	○	○	○
3 - 24	6B2192600	Viewfinder frame	1	○	○	○
3 - 25	109B35871	Contact	1	○	×	○
3 - 26	110M140121N	Screw	1	○	×	○
3 - 27	109B3286130	Contact	1	×	×	○
3 - 28	41A4389110	Shoe seat assembly	1	○	×	○
3 - 29	17B3288370	Pin	1	○	×	○
3 - 30	112B2050650	Contact	1	○	×	○
3 - 31	115B2050700	Insulator	1	○	×	○
3 - 32	112B2050661	Contact	1	○	×	○

Fig. 3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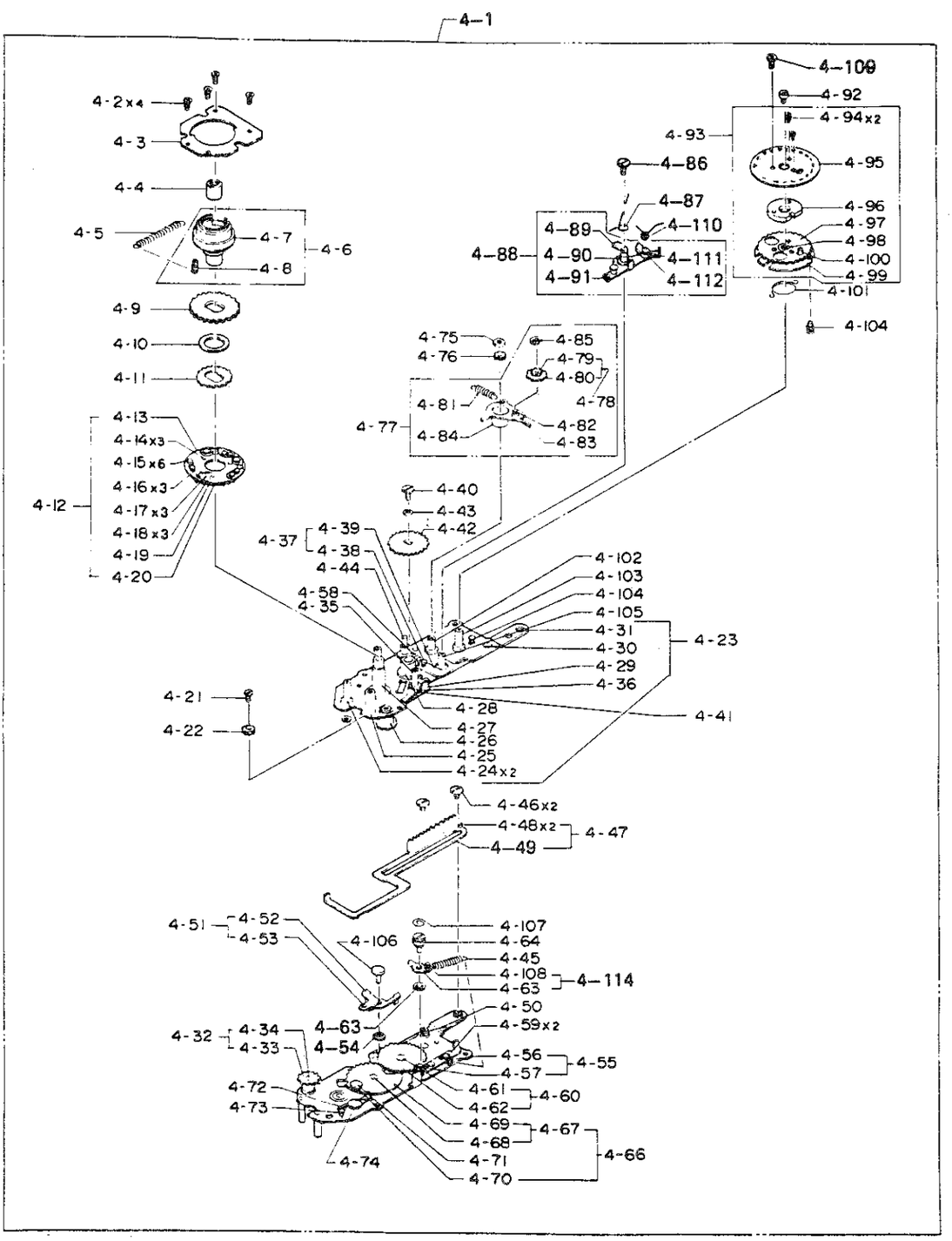
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
3 - 33	55B2050670	Washer	1	○	×	○
3 - 34	53B93480	Screw	1	○	×	○
3 - 35	111B4387860	Lead wire (red)	1	○	×	○
3 - 36	111B4387890	Lead wire (black)	1	○	×	○
3 - 37	115B4387900	Tube	1	○	×	○

Fig. 4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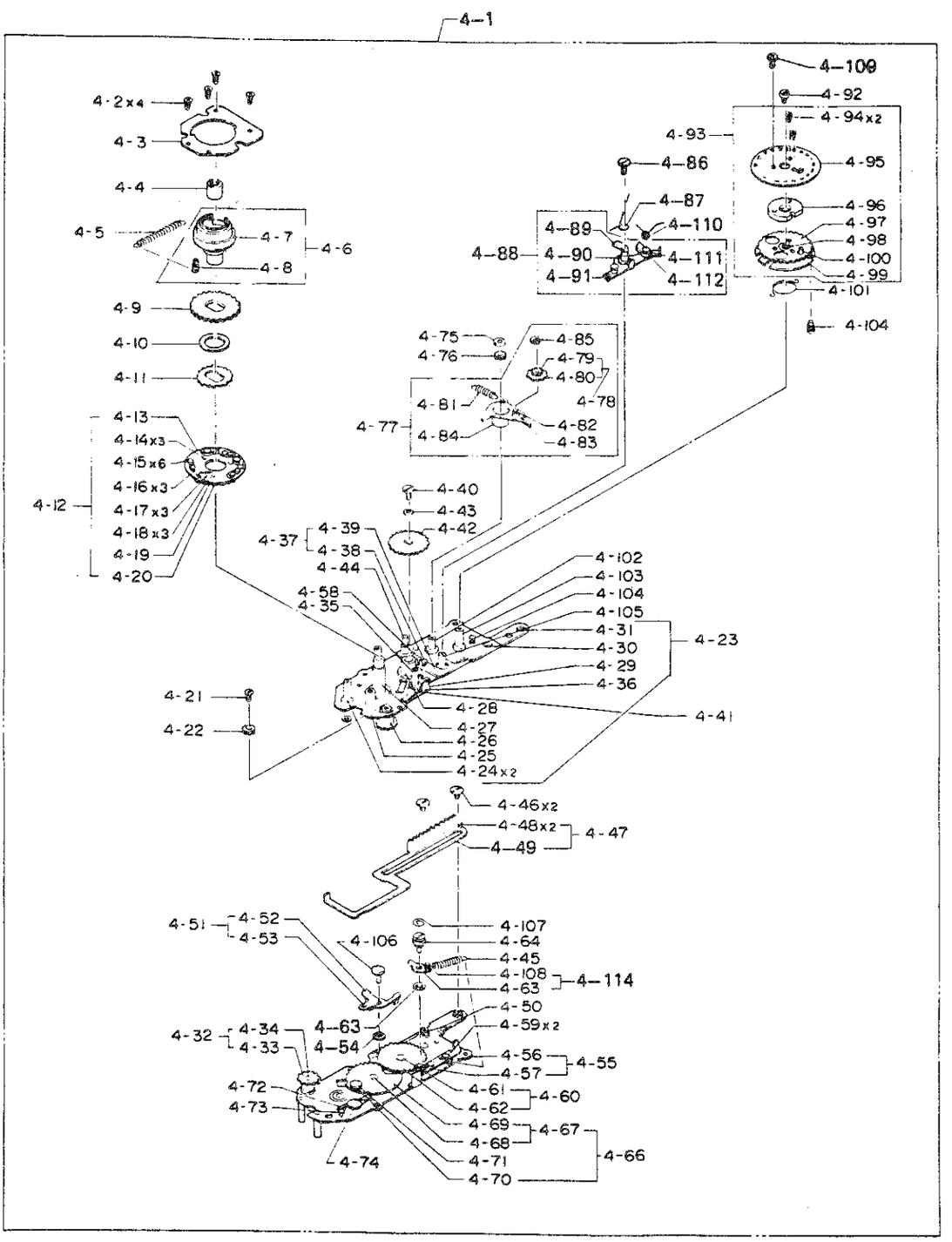
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
4 - 1	310A2192000	Film take - up mechanism assembly	1	○	○	○
4 - 2	111M170401S	Screw	4	○	○	○
4 - 3	46B2191090	Base plate	1	○	○	○
4 - 4	54B29361	Nut	1	○	○	○
4 - 5	56B29380	Spring	1	○	○	○
4 - 6	42A2192020	Sleeve assembly	1	○	○	○
4 - 7	42B2191010	Sleeve	1	×	○	○
4 - 8	17B29340	Pin	1	×	○	○
4 - 9	34B2191020	Gear	1	○	○	○
4 - 10	55B2191450	Washer	1	○	○	○
4 - 11	34B29350	Ratchet wheel	1	○	○	○
4 - 12	85A719480	Disc assembly	1	○	○	○
4 - 13	85B29272	Disc	1	×	○	○
4 - 14	17B489560	Rivet	3	×	○	○
4 - 15	17B29290	Pin	6	×	○	○
4 - 16	50B29310	Spring	3	○	○	○
4 - 17	17B489570	Claw shaft	3	×	○	○
4 - 18	85B489580	Pawl	3	×	○	○
4 - 19	34B489550	Gear	1	×	○	○
4 - 20	34B489541	Pawl wheel	1	×	○	○
4 - 21	53B29190	Screw	1	○	○	○
4 - 22	34B489620	Gear	1	○	○	○
4 - 23	46A2192010	Base plate assembly	1	×	○	○
4 - 24	54B29160	Column	2	×	○	○
4 - 25	54B29090	Column	1	×	○	○
4 - 26	42B489680	Sleeve	1	×	○	○
4 - 27	32B29240	Main shaft	1	×	○	○
4 - 28	31B489591	Sleeve	1	×	○	○
4 - 29	46B2191000	Arm	1	×	○	○
4 - 30	32B2191301	Shaft	1	×	○	○
4 - 31	32B2191291	Shaft	1	×	○	○
4 - 32	34A2192050	Gear assembly	1	○	○	○

Fig. 4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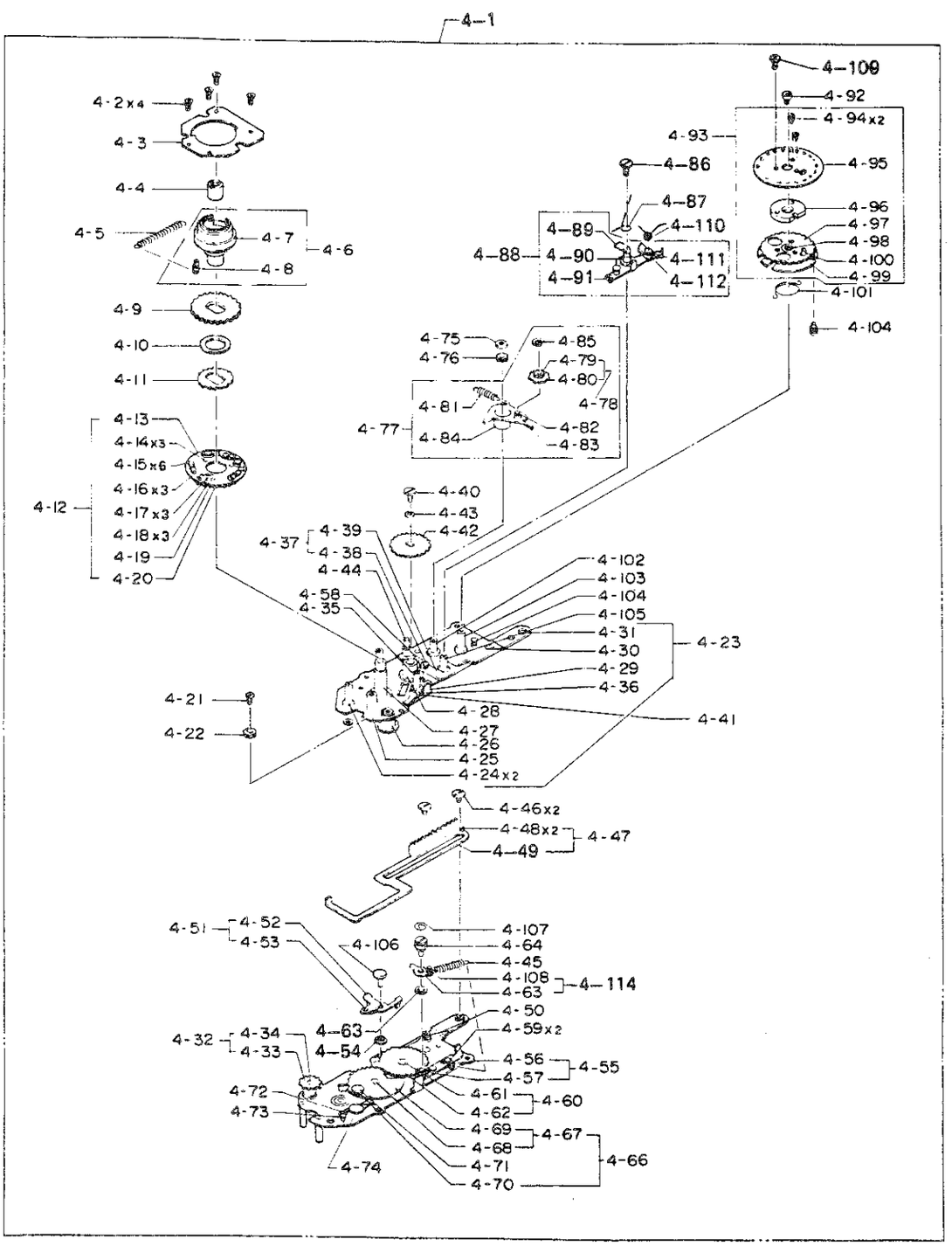
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
4 - 33	34B2191070	Gear	1	X	O	O
4 - 34	32B489611	Gear	1	X	O	O
4 - 35	54B29440	Column	1	X	O	O
4 - 36	45B29482	Pawl	1	X	O	O
4 - 37	47A2192140	Return lever assembly	1	X	O	O
4 - 38	17B2191400	Pin	1	X	O	O
4 - 39	47B2191380	Return lever	1	X	O	O
4 - 40	53B29220	Screw	1	O	O	O
4 - 41	55B29230	Washer	1	X	O	O
4 - 42	34B2191080	Gear	1	O	O	O
4 - 43	165M232H	Washer	1	O	O	O
4 - 44	17B2191410	Guide shaft	1	X	O	O
4 - 45	50B29870	Spring	1	O	O	O
4 - 46	53B2191310	Screw	2	O	O	O
4 - 47	34A2192110	Rack assembly	1	O	O	O
4 - 48	17B28910	Pin	1	X	O	O
4 - 49	34B2191280	Rack	1	X	O	O
4 - 50	50B2191440	Shaft	1	X	O	O
4 - 51	47A2192150	Lock lever assembly	1	O	O	O
4 - 52	47B2191420	Lock lever	1	X	O	O
4 - 53	17B28830	Interlock pin	1	X	O	O
4 - 54	32B28871	Rotary base	1	X	O	O
4 - 55	47A2192130	Lever assembly	1	X	O	O
4 - 56	47B2191361	Lever	1	X	O	O
4 - 57	17B29050	Interlock pin	1	X	O	O
4 - 58	50B2191390	Spring	1	O	O	O
4 - 59	17B2191370	Guide pin	2	X	O	O
4 - 60	34A2192090	Gear assembly	1	O	O	O
4 - 61	34B2191230	Gear	1	X	O	O
4 - 62	32B2191220	Gear shaft	1	X	O	O
4 - 63	55B2191141	Washer	1	X	O	O
4 - 64	17B2191152	Shaft	1	X	O	O

Fig. 4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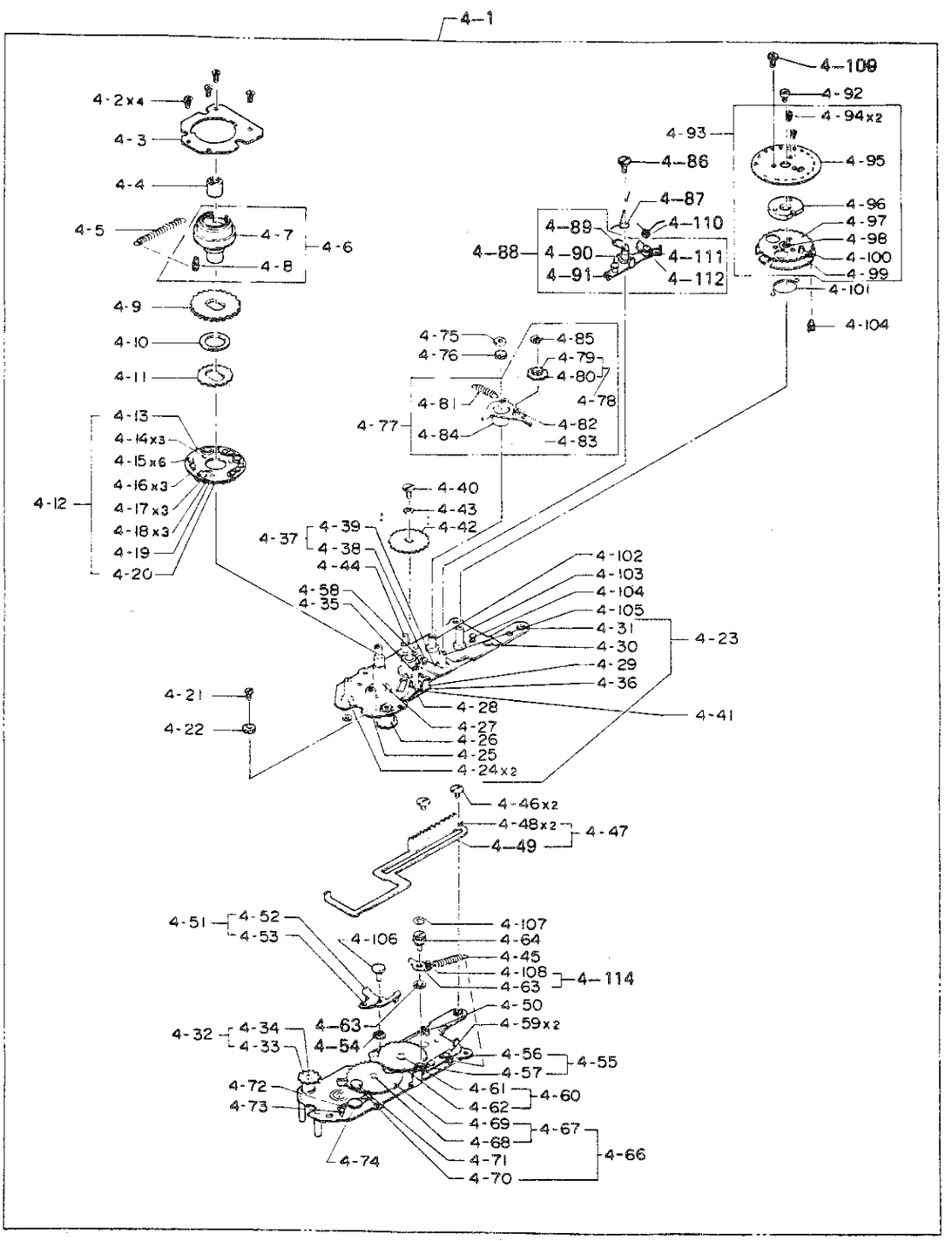
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
4 - 65	47B2191130	Ratchet pawl	1	X	O	O
4 - 66	34A2192040	Ratchet wheel assembly	1	O	O	O
4 - 67	34A2192030	Ratchet wheel assembly	1	X	O	O
4 - 68	32B2191040	Shaft	1	X	O	O
4 - 69	34B2191030	Ratchet wheel	1	X	O	O
4 - 70	32B2191060	Roller	1	X	O	O
4 - 71	32B2191050	Shaft	1	X	O	O
4 - 72	47B2191112	Hook	1	X	O	O
4 - 73	50B2191121	Spring	1	O	O	O
4 - 74	17B2191101	Shaft	1	X	O	O
4 - 75	54B494060	Nut	1	O	O	O
4 - 76	34B494050	Gear	1	O	O	O
4 - 77	85A2192080	Rotary plate assembly	1	O	O	O
4 - 78	34A2192070	Gear assembly	1	O	O	O
4 - 79	34B2191190	Gear	1	X	O	O
4 - 80	34B2191200	Gear	1	X	O	O
4 - 81	50B494110	Spring	1	O	O	O
4 - 82	32B2191180	Gear shaft	1	X	O	O
4 - 83	85B2191160	Rotary plate	1	X	O	O
4 - 84	29B2191170	Rotary barrel	1	X	O	O
4 - 85	191M012T	E - clip	1	O	O	O
4 - 86	53B2191470	Screw	1	O	O	O
4 - 87	50B2191463	Spring	1	O	X	O
4 - 88	47A2192121	Lever assembly	1	O	O	O
4 - 89	47B2191355	Lever	1	X	O	O
4 - 90	42B2191340	Bushing	1	X	O	O
4 - 91	17B28830	Interlock pin	1	X	O	O
4 - 92	53B28730	Screw	1	O	O	O
4 - 93	34A2192100	Dial assembly	1	O	O	O
4 - 94	53B721100	Screw	2	O	O	O
4 - 95	58B494193	Dial	1	O	O	O
4 - 96	24B494181	Spacer	1	O	O	O

Fig. 4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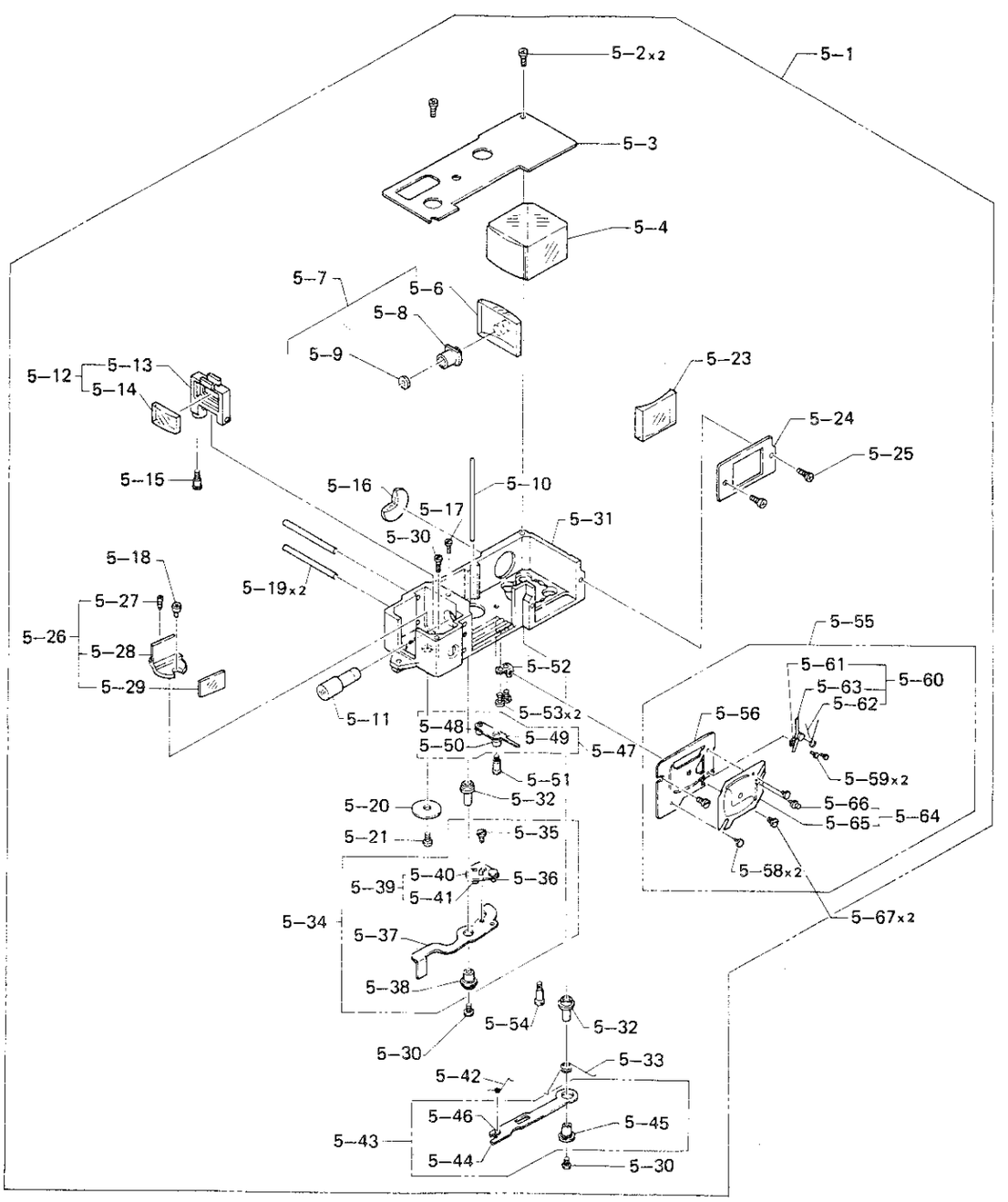
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
4 - 97	34B494170	Counter gear	1	X	O	O
4 - 98	29B2191250	Sleeve	1	X	O	O
4 - 99	34B494140	Disc	1	X	O	O
4 - 100	17B2191260	Connecting pin	1	X	O	O
4 - 101	50B28720	Spring	1	O	O	O
4 - 102	29B2191210	Shaft holder	1	X	O	O
4 - 103	32B2191240	Shaft	1	X	O	O
4 - 104	17B2191270	Stopper pin	2	X	O	O
4 - 105	32B2191330	Lever shaft	1	X	O	O
4 - 106	17B2191430	Lever shaft	1	X	O	O
4 - 107	50B2191490	Spring	1	O	O	O
4 - 108	17B2191480	Pin	1	X	O	O
4 - 109	111M140501S	Screw	1	O	O	O
4 - 110	50B4388911	Spring	1	X	O	O
4 - 111	32B4388900	Shaft	2	X	O	O
4 - 112	82B4388890	Lever	1	X	O	O
4 - 114	47A2192160	Lever assembly	1	X	O	O

Fig. 5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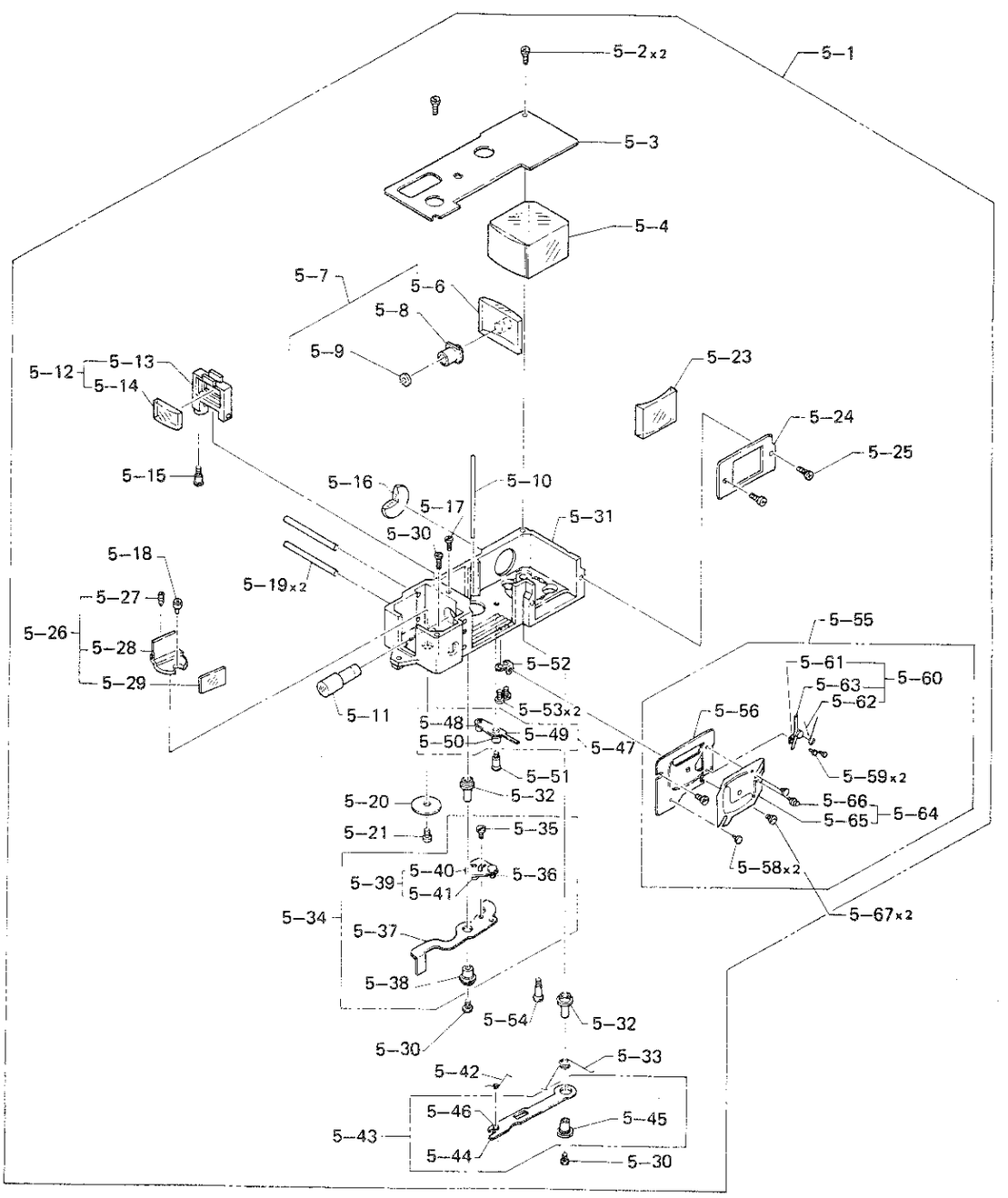
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
5 - 1	99A51153A00	Range/Viewfinder assembly (SR27A)	1	○	○	×
5 - 2	110M170251S	Screw	2	○	○	×
5 - 3	11B2906950	Cover	1	○	○	×
5 - 4	2A2886990	Plism (G2+G3)	1	×	○	×
5 - 5	1B2887040	Lens (G5)	1	×	○	×
5 - 6	21A2906700	Lens holder assembly	1	×	○	×
5 - 7	21B2906960	Lens holder	1	×	○	×
5 - 8	21B2906790	Lens frame	1	×	○	×
5 - 9	55B2906990	Washer	1	×	○	×
5 - 10	1B2887050	Lens (G6)	1	×	○	×
5 - 11	85B2906820	Base plate	1	×	○	×
5 - 12	11B2906980	Mask	1	×	○	×
5 - 13	1B2887000	Lens (G1)	2	○	○	×
5 - 14	111M170301S	Screw	4	○	○	×
5 - 15	3B2906970	Reflector	1	○	○	×
5 - 16	110M170301S	Screw	1	○	○	×
5 - 17	21A2193710	Moving frame assembly	1	×	○	○
5 - 18	21B2193340	Moving frame	1	×	○	○
5 - 19	1B2167110	Lens	1	×	○	○
5 - 20	17B2193350	Pin	1	×	○	○
5 - 21	30B2193360	Guide rail	2	×	○	○
5 - 22	10A2193720	Mirror base assembly	1	×	○	○
5 - 23	10B2193240	Mirror base	1	×	○	○
5 - 24	3B2167120	Reflector	1	×	○	○
5 - 25	53B32460	Adjust screw	1	×	○	○
5 - 26	17B32471	Eccentric pin	1	×	○	○
5 - 27	50B32480	Leaf spring	1	○	○	○
5 - 28	53B32490	Screw	1	○	○	○
5 - 29	1B2887030	Lens (G4)	1	×	○	×
5 - 30	11B2906810	Mask	1	○	○	×
5 - 31	111M170251S	Screw	1	○	○	○
5 - 32	111M140253S	Screw	1	○	○	○

Fig. 5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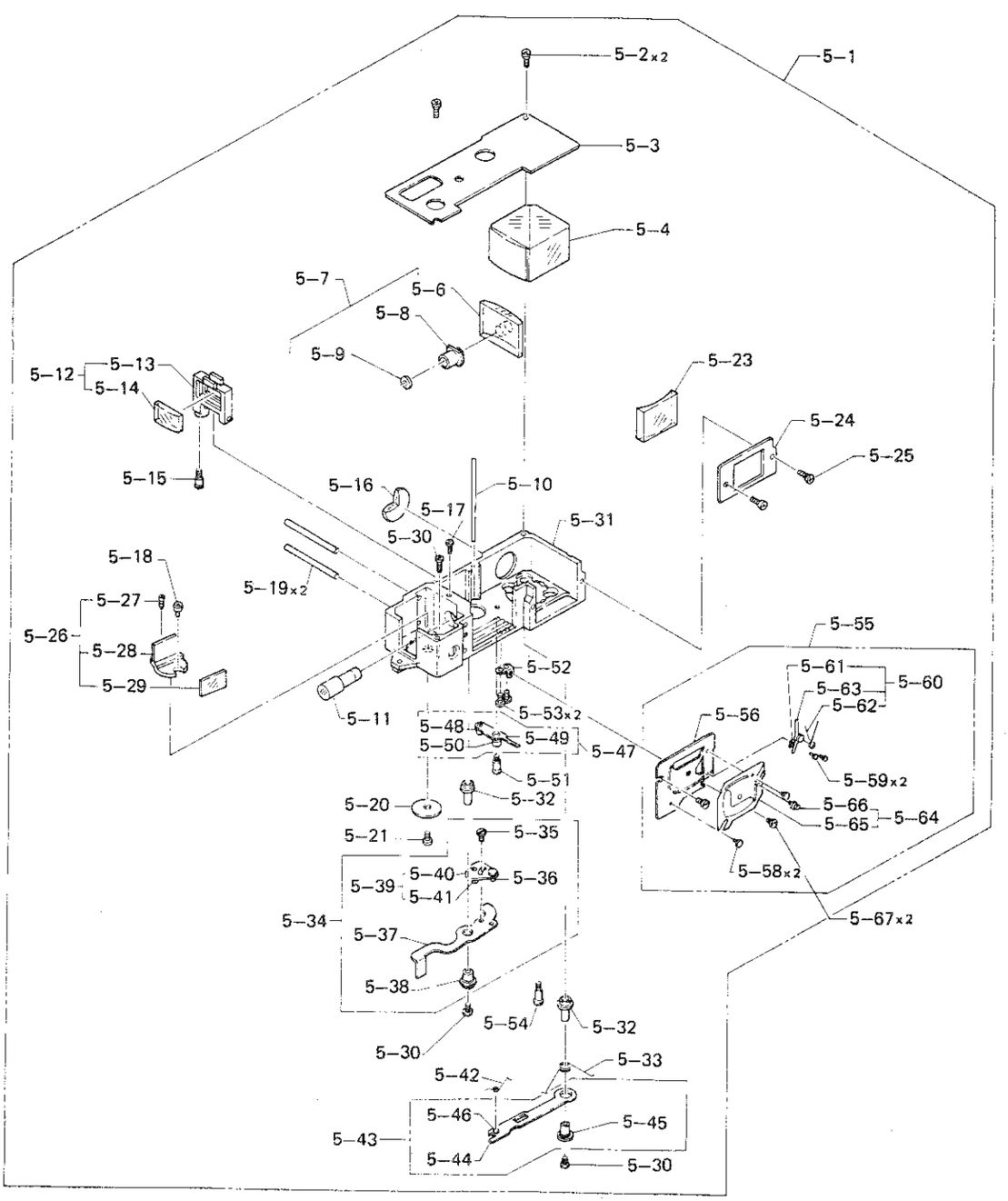
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
5 - 33	10B2906800	Viewfinder case	1	×	○	×
5 - 34	32B32590	Shaft	2	×	○	○
5 - 35	50B2193330	Spring	1	○	○	○
5 - 36	17B2193260	Pin	1	×	○	○
5 - 37	41A2906740	Viewfinder frame	1	○	○	×
5 - 38	41B2906880	Base plate	1	×	○	×
5 - 39	29B2906850	Plate	1	×	○	×
5 - 40	53B2193440	Screw	1	×	○	○
5 - 41	53B2906930	Screw	1	×	○	×
5 - 42	5B2906860	Stationary viewfinder frame	1	×	○	×
5 - 43	5A2906730	Stationary viewfinder frame assembly	1	×	○	×
5 - 44	5B2906870	Moving viewfinder frame	1	×	○	×
5 - 45	17B2906920	Pin	1	×	○	×
5 - 46	17B2193400	Guide pin	2	×	○	○
5 - 47	42B2906910	Collar	1	×	○	×
5 - 48	47B2906890	Interlock lever	1	×	○	×
5 - 49	17B2906900	Pin	1	×	○	×
5 - 50	50B2906940	Spring	1	○	○	×
5 - 51	110M170301S	Screw	2	×	○	×
5 - 52	47A2906720	Linkage assembly I	1	○	○	×
5 - 53	47A2193760	Adjust lever assembly	1	×	○	○
5 - 54	47B2193290	Adjust lever	1	×	○	×
5 - 55	17B32740	Pin	1	×	○	×
5 - 56	32B32760	Shaft	1	×	○	○
5 - 57	53B32770	Screw	1	×	○	○
5 - 58	47B2906830	Linkage I	1	×	○	×
5 - 59	42B2193280	Bushing	1	×	○	○
5 - 60	47A2906710	Linkage assembly II	1	○	○	×
5 - 61	47B2906840	Linkage II	1	×	○	×
5 - 62	42B2193320	Bushing	1	×	○	○
5 - 63	17B29290	Pin	1	×	○	○
5 - 64	50B2193470	Spring	1	○	○	○

Fig. 5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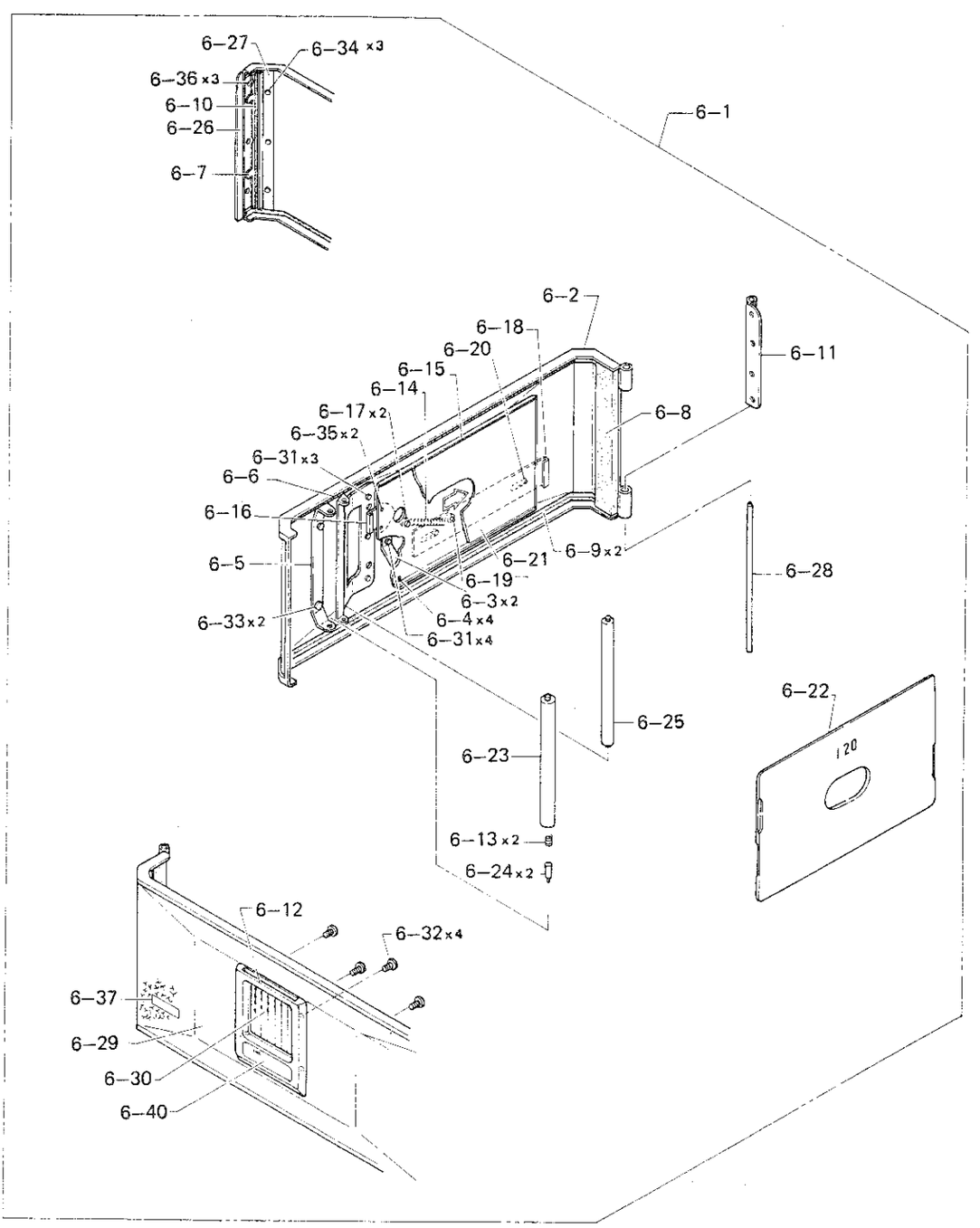
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (III)	GSW
5 - 65	53B32580	Screw	3	○	○	○

Fig. 6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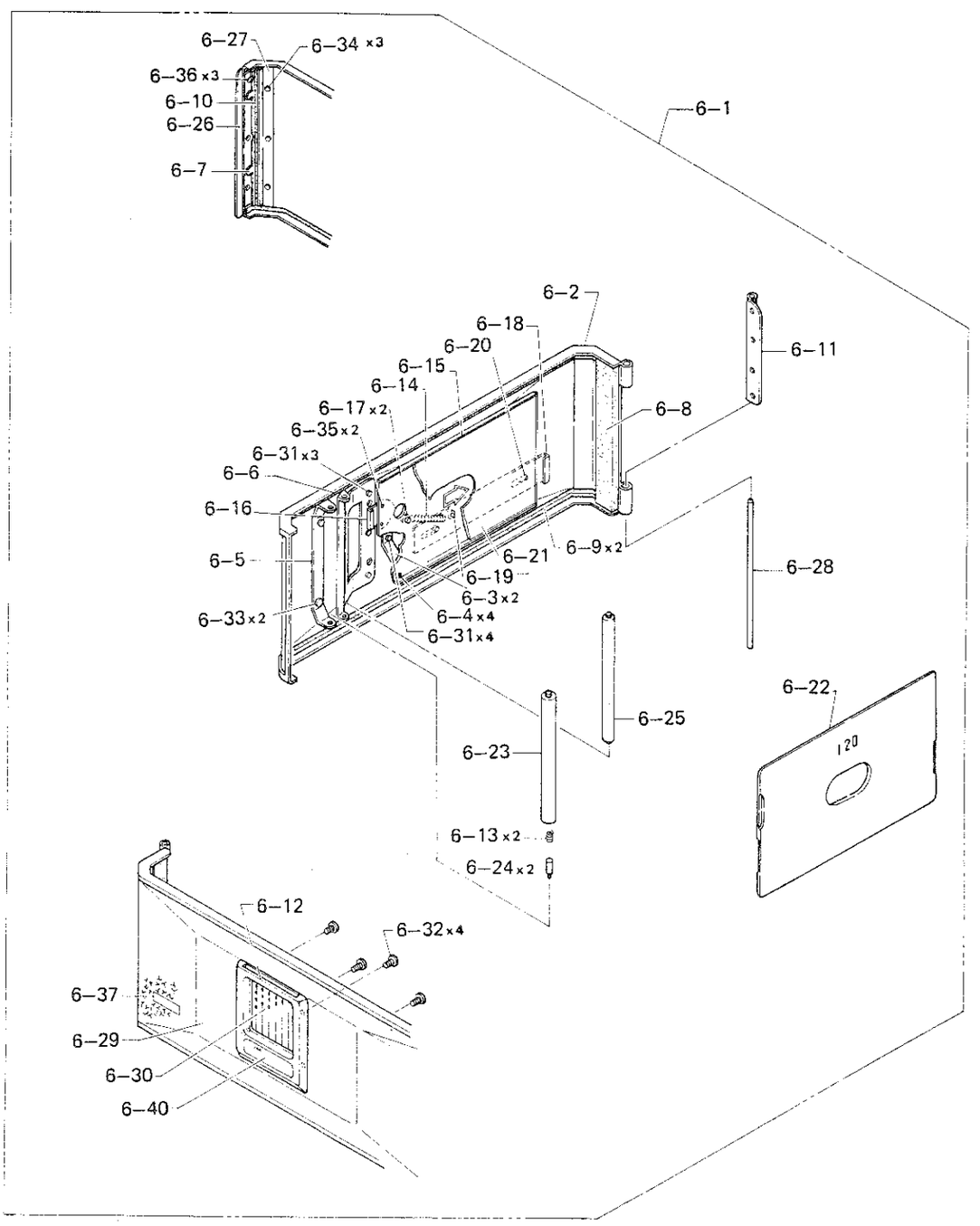
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
6 - 1	302A4389250	Camera back assembly	1	○	×	○
6 - 2	11B4389380	Camera back	1	×	×	○
6 - 3	50B31660	Spring	2	×	○	○
6 - 4	17BM31700	Rivet	4	×	○	○
6 - 5	85B31710	Roller support	1	×	○	○
6 - 6	50B31730	Leaf spring	1	×	○	○
6 - 7	45B31760	Hook	1	×	○	○
6 - 8	27B31780	Moquette (I)	1	○	○	○
6 - 9	27B31790	Moquette (II)	2	○	○	○
6 - 10	27B32000	Moquette (III)	1	○	○	○
6 - 11	19B32020	Hinger	1	○	○	○
6 - 12	12B328173	Pocket	1	×	×	○
6 - 13	50B30170	Spring	1	○	○	○
6 - 14	50B94640	Spring	1	×	○	○
6 - 15	11B492530	Pressure plate holder	1	×	○	○
6 - 16	44B492540	Stationary plate	1	×	○	○
6 - 17	17B492550	Pin	1	×	○	○
6 - 18	44B492560	Moving plate	1	×	○	○
6 - 19	17B492570	Pin	1	×	○	○
6 - 20	17B492580	Guide rivet	2	×	○	○
6 - 21	51B492600	Velveteen	1	×	○	○
6 - 22	44B492610	Pressure plate	1	○	○	○
6 - 23	37B492630	Roller	1	○	○	○
6 - 24	17B492640	Moving pin	1	○	○	○
6 - 25	37B492660	Roller	1	○	○	○
6 - 26	27B492672	Cover plate	1	×	○	○
6 - 27	27B492680	Light shielding plate	1	×	○	○
6 - 28	32B32031	Hinger shaft	1	○	○	○
6 - 29	59B4389400	Leather	1	○	×	○
6 - 30	58B3287212	Cover plate	1	○	×	○
6 - 31	170M15014B	Pin	7	×	○	○
6 - 32	113M170221S	Screw	4	×	×	○

Fig. 6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6–35 ×2
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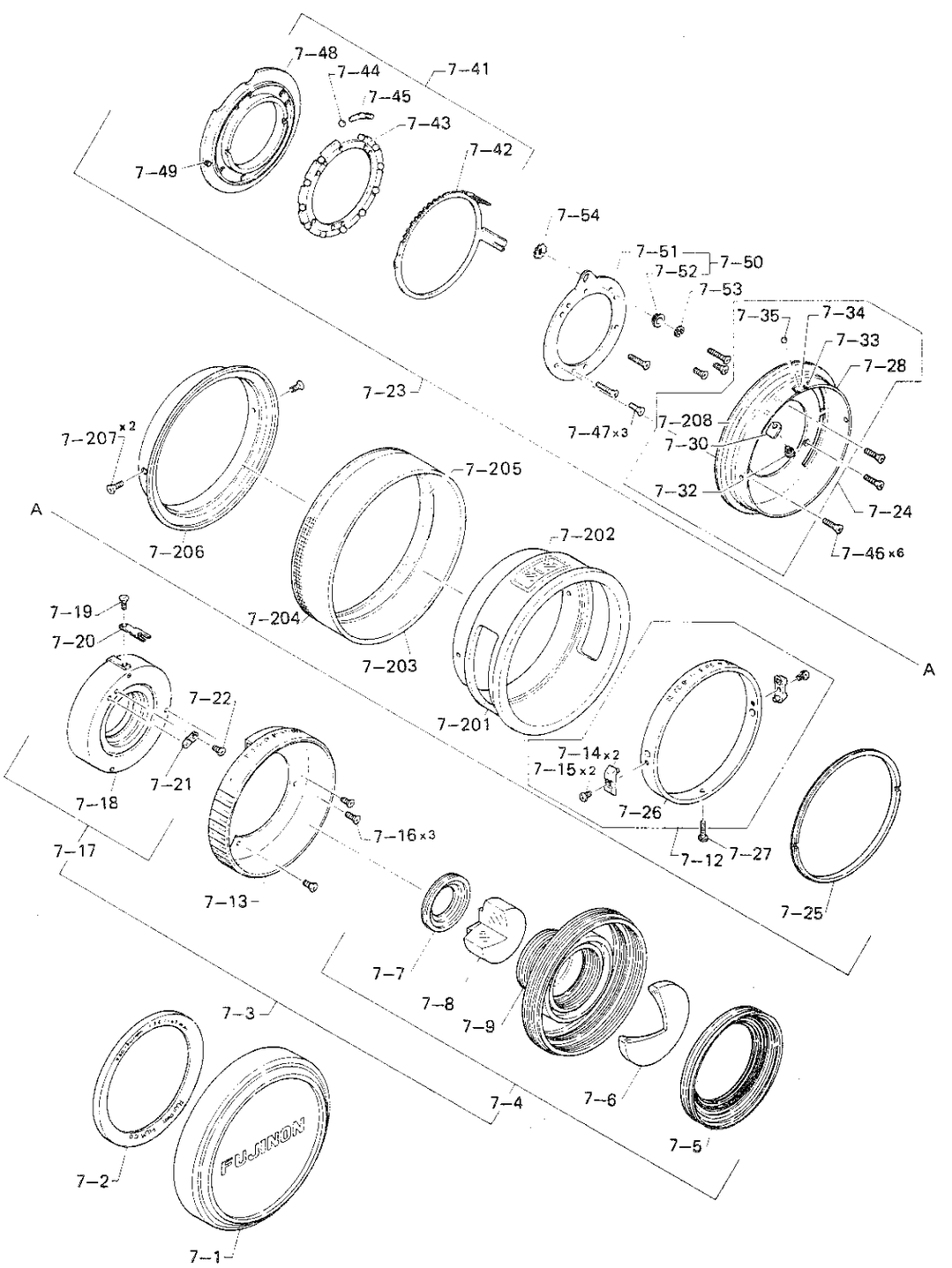
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
6 - 33	170M15022B	Pin	2	X	○	○
6 - 34	170M15028B	Pin	3	X	○	○
6 - 35	170M200016B	Pin	2	X	○	○
6 - 36	170M15022B	Pin	3	X	○	○
6 - 37	58B29520	Number plate	1	○	○	○
6 - 40	58B3772352	Name plate	1	○	X	○

Fig. 7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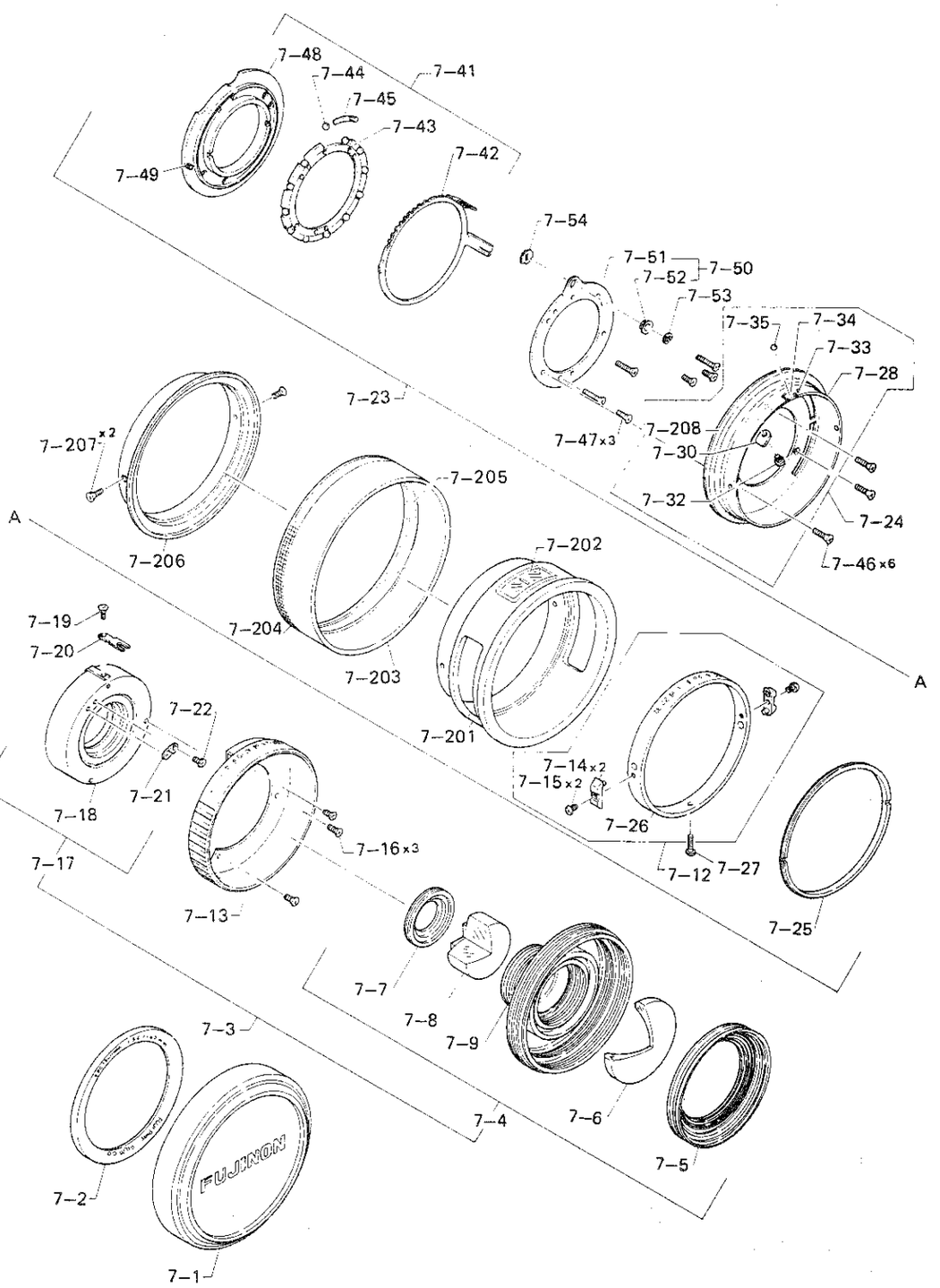
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
7 - 1	57B4387840	Lens cap	1	○	×	○
7 - 2	23B2351180	Name ring	1	○	×	○
7 - 3	38A4391950	Shutter assembly	1	×	×	×
7 - 4	21A2907010	Front lens assembly	1	○	○	×
7 - 5	23B2351140	Hold ring	1	×	×	○
7 - 6	1B2900600	Lens (G1)	1	×	○	×
7 - 7	23B2351130	Hold ring	1	×	×	○
7 - 8	1A2900580	Lens (G2) + (G3)	1	×	○	×
7 - 9	21B2351110	Front lens frame	1	×	×	○
7 - 13	23B4390060	Shutter speed selector ring	1	○	○	○
7 - 14	16B4390040	Knob	2	○	×	○
7 - 15	53B4387850	Screw	2	○	×	○
7 - 16	110M170303S	Screw	3	○	○	○
7 - 17	38A4391960	Shutter assembly	1	○	×	×
7 - 18	38B2907090	0# shutter	1	×	×	×
7 - 19	101M120143N	Screw	1	○	○	○
7 - 20	47B1349040	Aperture lever	1	○	○	○
7 - 21	109B35870	Contact	1	○	○	○
7 - 22	110M140121N	Screw	1	○	○	○
7 - 23	324A4392502	Lens barrel assembly	1	○	×	×
7 - 24	23A4392570	Index ring assembly	1	○	×	×
7 - 25	23B2188620	Hold ring	1	○	○	○
7 - 26	23B4392650	Aperture selector ring	1	○	×	×
7 - 27	110M200601S	Screw	1	○	×	○
7 - 28	23B4392630	Index ring	1	×	×	×
7 - 30	110B4389700	PCB	1	○	×	○
7 - 31	108B24300	Lug	1	×		
7 - 32	110M170181S	Screw	1	○	×	○
7 - 33	170M15018F	Rivet	1	×	○	○
7 - 34	50B2188550	Leaf spring	1	×	○	○
7 - 35	200M20	Steel ball	1	○	○	○
7 - 37	112A3281051	Synchrosocket assembly	1	○	×	○

Fig. 7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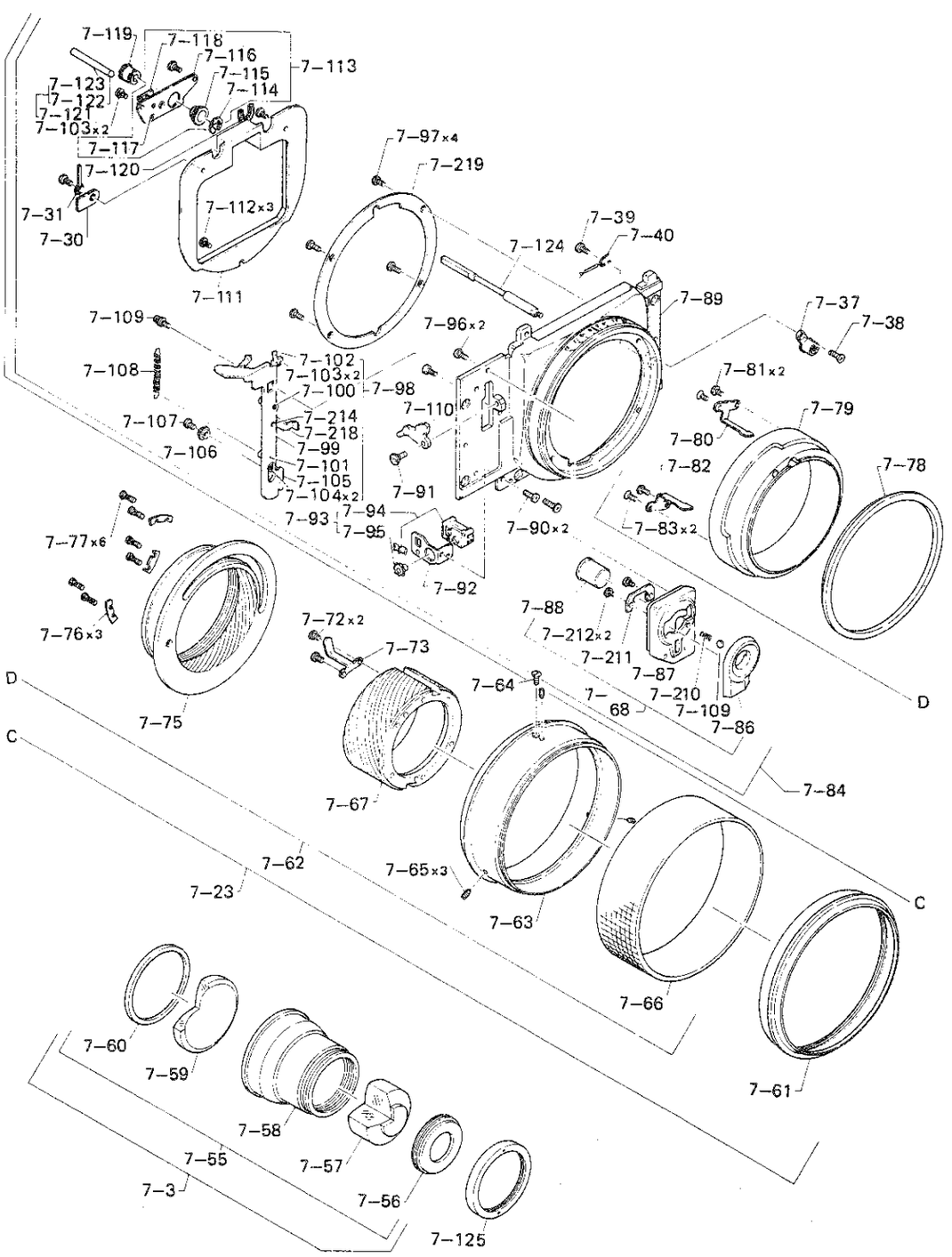
REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
7 - 38	111M170251N	Screw	1	○	×	○
7 - 39		Synchrocontact	1	○	×	○
7 - 40	108B3281790	Lug	1	○	×	○
7 - 41	23A4389930	Shutter frame assembly	1	○	×	○
7 - 42	34B2188520	Set plate	1	×	○	○
7 - 43	23B2188740	Ring	1	×	○	○
7 - 44	200M20	Steel ball	12	×	○	○
7 - 45	24B2188510	Spacer	12	×	○	○
7 - 46	111M200901S	Screw	6	○	○	○
7 - 47	111M170451S	Screw	3	×	○	○
7 - 48	23B4389640	Shutter frame	1	×	×	○
7 - 49	17B2188500	Stopper pin	1	×	○	○
7 - 50	47A2188920	Holder assembly	1	○	○	○
7 - 51	47B2188530	Holder	1	×	○	○
7 - 52	42B99361	Shaft holder	1	○	○	○
7 - 53	191M012T	E - clip	1	○	○	○
7 - 54	34B2188380	Gear	1	○	○	○
7 - 55	21A2907020	Rear lens frame assembly	1	○	○	×
7 - 56	23B2351160	Hold ring	1	×	×	○
7 - 57	1A2900590	Lens (G4) + (G5)	1	×	○	×
7 - 58	21B2351151	Rear lens frame	1	×	×	○
7 - 59	1B2900650	Lens (G6)	1	×	○	×
7 - 60	23B2351170	Holding ring	1	×	×	○
7 - 61	23B2188660	Focusing ring (II)	1	○	○	○
7 - 62	21A4392560	Helicoid assembly	1	○	×	×
7 - 63	23B2188640	Focusing ring (I)	1	○	×	○
7 - 64	53B2188810	Screw	1	○	○	○
7 - 65	120M200301S	Set screw	3	○	○	○
7 - 66	59B2188690	Knurled ring	1	○	○	○
7 - 67	21B2188440	Male helicoid	1	×	×	○
7 - 68	12A4389960	Cover assembly	1	○	×	○
7 - 69	27B4390120	Plate (II)	1	○	○	○

Fig. 7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REF NO.	PART NO.	PART NAME	Q'TY	CAN BE SUPPLIED ORNOT	COMMONLY USED	
					GW (II)	GSW
7 - 70	27B4390110	Plate (I)	1	○	○	○
7 - 72	110M140351S	Screw	4	○	○	○
7 - 73	47B2188670	Interlock plate	1	○	○	○
7 - 75	23B4392610	Helicoid ring	1	×	×	×
7 - 76	47B2188450	Thrust plate	3	○	○	○
7 - 77	17B2188460	Set screw	6	○	○	○
7 - 78	23B2188420	Ring	1	×	○	○
7 - 79	23B4392600	Hold ring	1	×	×	×
7 - 80	30B2188470	Helicoid guide (I)	1	○	○	○
7 - 81	111M200503S	Screw	2	○	○	○
7 - 82	30B2188480	Helicoid guide (II)	1	○	○	○
7 - 83	110M200503S	Screw	2	○	○	○
7 - 84	46A4392550	Front mask assembly	1	○	×	×
7 - 86	47B4389590	Front shutter release ring	1	×	×	○
7 - 87	12B4389580	Cover	1	×	×	○
7 - 88	16B2188200	Front shutter release	1	○	○	○
7 - 89	46B4392590	Front mask	1	×	×	×
7 - 90	111M170351S	Screw	2	○	○	○
7 - 91	32B2188220	Shaft	1	○	○	○
7 - 92	41B2188700	Angle	1	×	○	○
7 - 93	322A2188980	Shutter actuation counter assembly	1	○	○	○
7 - 94	322B2188980	Shutter actuation counter	1	×	○	○
7 - 95	34B2188770	Ratchet wheel	1	×	○	○
7 - 96	113M170301S	Screw	2	○		
7 - 97	110M260603S	Screw	4	○	○	○
7 - 98	47A4389950	Release lever assembly	1	○	×	○
7 - 99	47B4389690	Release lever	1	×	×	○
7 - 100	17B2188270	Pin	1	×	○	○
7 - 101	17B2188280	Pin	1	×	○	○
7 - 102	47B2188730	Release lever	1	×	×	○
7 - 103	170M12023F	Rivet	2	×	×	○
7 - 104	170M12018F	Rivet	2	×	○	○